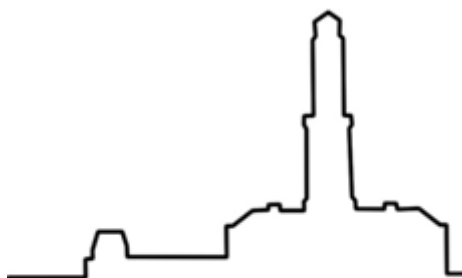




**FACULDADE DE ARQUITETURA**  
UNIVERSIDADE DE LISBOA

## **DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES**

Presence of Local and Global References in Public Spaces



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DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES  
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## **Development of Public Spaces in Industrial Cities**

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### **ABSTRACT** (217 words)

The location of the seaside countries made people plan cities along the shores. Situated in the "nose" of Iberian Peninsula, Sines became one of the most important port cities with already existing industry of the region which has been established long time ago. Its natural coast with one of the most beautiful beaches in Portugal can bring a lot of people here. Present work is about making this coastal attraction accessible for everybody and merging the inhabited part of the North beach with the city.

Lately the rehabilitation of an urban area, converting empty streets without shadows to the green boulevards became necessary. Day by day technologies about planting of greenery improve, enabling engineers to provide more efficiency in the limited period of time. The proposal is about rehabilitation of the streets which will establish a pedestrian and cycling connection between the city and the North beach revealing the lighthouse of the Cabo de Sines as well as its' reconstruction given its architectural and esthetic significance to the other side of the city. The proposal is written based on Donald Judd' concept about Hortus Conculus.

Restoration of the old path and bringing the memory and symbol to citizens is a main character of the work.

### **| Key Words**

| Port-city-nature | Connection | Urban design | Lighthouse | Sines

DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES  
Presence of Local and Global References in Public Spaces

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DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES  
Presence of Local and Global References in Public Spaces

<b>LIST OF FIGURES.....</b>	<b>7</b>
<b>I   INTRODUCTION.....</b>	<b>11</b>
<b>II   CHAPTER I.....</b>	<b>17</b>
<b>PUBLIC PLACES, URBAN SPACES.....</b>	<b>19</b>
II. I   Urban design.....	19
II. II   Public spaces.....	20
II. II. I   Meaning of public spaces.....	20
II. II. I   Public spaces of industrial cities.....	24
II. III   Streets and boulevards.....	26
<b>III   CHAPTER II.....</b>	<b>31</b>
<b>SINES.....</b>	<b>33</b>
III. I   Sines - history. City dwellers' point of view.....	33
III. II   Sines - an industrial city.....	34
III. III   Public Spaces and Urban Places in Sines.....	35
<b>IV   CHAPTER III.....</b>	<b>41</b>
<b>REHABILITATION. THE LIGHTHOUSE.....</b>	<b>43</b>
IV. I   Case studies.....	43
IV. II   The lighthouse of Sines.....	47
<b>V   FINAL PROJECT.....</b>	<b>53</b>
V. I   Program.....	55
V. II   Rua Floresta.....	56
V. III   Rehabilitation .....	59
<b>VI   CONCLUSION.....</b>	<b>61</b>
<b>VII   BIBLIOGRAPHY.....</b>	<b>64</b>
<b>VIII   MODELS.....</b>	<b>65</b>

## | LIST OF FIGURES

**Figure 1** | Experimental Road Signs, Palermo, 2009 (public design by Esterni, Milan) |

| Source: Understanding the Post-Industrial City: Metropolis, Urban Renewal and Public Space, 2009 (Proceeding book, joint PhD seminar)

**Figure 2** | Avenida da Liberdade, Braga (L) | Miren De Andrés, 2016

**Figure 3** | The Rio Mondego, Coimbra (R) | Afat Mammadzada, 2016

**Figure 4** | Garden of Galouste Gulbenkian (L) | Afat Mammadzada, 2015

**Figure 5** | Dolina Roz, Kislovodsk, Russia (R) | Afat Mammadzada, 2015

**Figure 6** | Potters Fields Park, London (L) | Afat Mammadzada, 2015

**Figure 7** | 9th April Garden, Lisboa (R) | Afat Mammadzada, 2014

**Figure 8** | Plaza Sul, Madrid, Spain (L) | Afat Mammadzada, 2014

**Figure 9** | Estoril, Portugal (R) | Mário Novais's Studio

**Figure 10** | Funicular, Baku, Azerbaijan (L) | anonym, 1990's

**Figure 11** | Funicular, Baku, Azerbaijan (R) | anonym, 2013

**Figure 12** | Black City, Baku (L) | anonym, 1890

**Figure 13** | White City, Baku (R) | Baku White City, 2012  
[www.bakuwhitecity.com](http://www.bakuwhitecity.com)

**Figure 14** | Avenida da Liberdade (1898) | Estúdios Mário Novais  
(Feira Franca in Avenida da Liberdade e Rotunda - IV Centenário da Índia)

[Arquivo Municipal de Lisboa](#)

**Figure 15** | River Seine, Quai de Grenelle, Paris (L) | Afat Mammadzada, 2014

**Figure 16** | Pedestrian realm in Ocean Parkway | A. B. Jacobs, 1993

**Figure 17** | Pedestrian realm in Grand Concourse | A. B. Jacobs, 1993

**Figure 18** | Map. Condition plan of Sines. | Cartography of the Municipality of Sines, 2015

**Figure 19** | Jardim das Descobertas. View 1. | Afat Mammadzada, 2016

**Figure 20** | Jardim das Descobertas. View 2. | Indicated website  
<http://www.allaboutportugal.pt/fr/sines/jardins/jardim-das-descobertas>

**Figure 21** | Shuangxi Park and Chinese Garden, Taipei, Taiwan | Peter Bronski, 2007  
[https://en.wikipedia.org/wiki/Shuangxi\\_Park\\_and\\_Chinese\\_Garden#/media/File:Shuangxi\\_Park\\_and\\_Chinese\\_Garden\\_Taipei.jpg](https://en.wikipedia.org/wiki/Shuangxi_Park_and_Chinese_Garden#/media/File:Shuangxi_Park_and_Chinese_Garden_Taipei.jpg)

**Figure 22** | Jardim da Alameda da Paz. View 1. | Francisco Manuel Carrajola Oliveira, 2014  
<http://olhares.sapo.pt/jardins-120-alameda-da-paz-sines-foto5917895.html>

**Figure 23** | Jardim da Alameda da Paz. View 2. | Francisco Manuel Carrajola Oliveira, 2014  
<http://olhares.sapo.pt/jardins-121-alameda-da-paz-sines-foto5917896.html>

**Figure 24** | Jardim da República | Afat Mammadzada, 2016

**Figure 25** | Jardim da Boavista | João Plácido, 2012  
<http://cabodesines.blogspot.pt/2012/12/praga-do-escaravelho-vermelho-esta.html>

**Figure 26** | View from Jardim das Escadinhas do Muro da Praia | Silvanna & Rui, 2010  
<http://www.panoramio.com/photo/38372593>

DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES  
Presence of Local and Global References in Public Spaces

**Figure 27** | Jardim das Escadinhas do Muro da Praia |  
Silvanna & Rui, 2010  
<http://www.panoramio.com/photo/38372439>

**Figure 28** | Jardim Público de Porto Covo | François Mauriac, 2011

**Figure 29** | Delaware Bay lighthouse section | Text source

**Figure 30** | Delaware Bay lighthouse | Text source

**Figure 31** | Lighthouse-beach hut. View 1 | Text source

**Figure 32** | Lighthouse-beach hut. View 2 | Text source

**Figure 33** | Harlingen Lighthouse, The Netherlands | Text source  
<http://entertainmentdesigner.com/news/hospitality-design-news/hotel-design-news/our-favorite-5-lighthouse-hotels-from-around-the-world/>

**Figure 35** | The main building of the lighthouse | Afat Mammadzada, 2016

**Figure 36** | Old paths | Camara Municipal de Sines

**Figure 37** | Lighthouse line along the Atlantic coast of Portugal | ANC

**Figure 38** | The territory of the lighthouse | Indicated website,  
Changed by an author, 2016  
[www.maps.google.com](http://www.maps.google.com)

**Figure 39** | Tower of the lighthouse | Afat Mammadzada, 2016

**Figure 40** | Summer house | Afat Mammadzada, 2016

**Figure 41** | The kitchen of the sum. h. | Afat Mammadzada, 2016

**Figure 42** | Office b. of the lighthouse | Afat Mammadzada, 2016

**Figure 43** | Surrounding buildings | Afat Mammadzada, 2016

**Figure 44** | Small garden | Afat Mammadzada, 2016

DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES  
Presence of Local and Global References in Public Spaces

**Figure 45** | Rua Floresta | Afat Mammadzada, 2016

**Figure 46** | Planted road plan, Milladoiro | Luis Ponte Lavandeira,  
2007 - 2010

**Figure 47** | Planted road | Luis Ponte Lavandeira, 2007 - 2010

**Figure 48** | Combination of trees | Afat Mammadzada, 2015

**Figure 49** | Plan of Rua Floresta | Afat Mammadzada, 2015

**Figure 50** | View of Rua Floresta | Afat Mammadzada, 2015

**Figure 51** | Bionic transition | Afat Mammadzada, 2015

**Figure 52** | Hortus Conculus | Donald Judd

**Figure 53** | Ground floor plan | Afat Mammadzada, 2015

**Figure 54** | First Floor Plan | Afat Mammadzada, 2015



## I | INTRODUCTION

DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES  
Presence of Local and Global References in Public Spaces

## INTRODUCTION

This work is based on research of the relationship between the public spaces and sea costs area and finding solutions by citing to local and global references for Sines, making the city alive for citizens and accessible for guests. Chosen place is close to habitation and central part which makes it easy to access. It is the end of the city where people can feel outside from the city and therefore they can move away from the noise and retire with family and friends. Project of wide green boulevard-connection will save the natural spirit of the city. The different variations of pavement will clearly show the transformation "city-nature".

If we consider the history of Sines we will see that even in Napoleonic period the city was point of interest mostly due to its geographical location and the main interest was to develop the city as industrial port. Therefore, city started to grow from the south coast. North coast haven't touched at all. In the work process it will be necessary to compare the cartography of different periods of Sines. The process of reducing the amount of green plantings will show us the fertility rate of the soil in different parts of the city. As we can read in books, gardens are great places, human spaces - the idea of the place which will people have, which will enter inside, which will give us a sound of music, a breath, a special thoughtful mode, create our muse, increase the ability of fantasize. The challenge is not only to create. Everything - species of tree, bushes, pavement, rocks, type of the soil - creates the Genius Loci of the place. Portugal with its nature have established its landscape based on rocks, relief, planted urban spaces. Shortly - the garden is the paradise on earth.

We found ourselves in a time when ecology and energy efficiency have become key factors for the architects in their designs. For many years, each of us tried to give at least some environmental benefits. In this case, the eyes and the air will be gracing the trees already growing in the area for many years. Camping park is famous for its tall pine trees, which organize the spatial entity. As the vertical elements they actually form a composition and specific northern atmosphere extrinsic for the tropics of Portugal. Not so long ago in the territory of present Camping Park of Sines there were a lot of those trees which are typical for this area.

The person who will enter the city for the first time will immediately feel the nature of the country, its characteristics, and tendency due to the public spaces provided . Thus, the city turns into

a cultural face of the country and the nation as a whole. The work will also be presented with elements of the typical colors on the example of gardens, parks and other fragments of cities in Portugal.

The city currently doesn't have good connections with the very beautiful north beach that has perfect landscape. It also doesn't have any green public space which is becoming one of the important part of the cities' day to day life. Especially in industrial cities people need contrast images.

The main aim is to create new network between leisure areas, plan new active social life of the city, create clear infrastructure; rehabilitate the "memory"; to contact North beach with the South beach by a green line.

For the most port cities one of hallmarks for the whole history had been a connection between city and harbor. And the main obstacle in case of Sines is the steep topography. Unfavorable environmental conditions, visual discomfort, the poor quality of the urban architectural environment, unsettled pedestrian spaces, the lack of comfortable public spaces, and degradation of green areas led the city to loose its past vital existence which we can read from memoirs with interest.

In many cities peripheral areas are poor, boring, sleeping areas in term of architecture and functionality and they differ by scarcity and monotony. There are no comfortable places for communication, for active and quiet rest. These factors force citizens to seek places outside of their residential areas. And usually the most visited areas are the historical center of the city and in this case arises the problem with roads.

Nowadays increases enthusiasm to sports and in a small city cycling roads become irreplaceable.

Leisure phenomenon represents a kind of cultural and aesthetic development of modern interest and acts qualitatively by new stage of connection of culture, sports, comfort.

State of landscape architecture allows to judge it as an independent and bright phenomenon created by the Earth itself and needs to be always remain the main part of the urban environment. We have a number of sources which show the significant role of the nature, trees in Sines. So, how can that essential thing be returned to the city?

There is such a thing that for more productive work people need to be well rested. In Sines its natural gifts are not used as it should because of access. Nature gives us a soul, air, breeze and more incredible things. And what shall we give a nature? Does it

## DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES

### Presence of Local and Global References in Public Spaces

need new Genius Loci? How it can grow inside and be a part of the city?

What should be taken into account in the preparation of programs for the implementation of this undertaking: the difference between the public places of villages and towns? Level of full welfare and free comprehensive development of all members of the society (including age average and people with disabilities)?

The main building of the Northern Sines is a lighthouse. Does it get enough attention and guests? How to rediscover the pearl inside of the deep industrial location?

DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES  
Presence of Local and Global References in Public Spaces

## **II | CHAPTER I**

### **PUBLIC PLACES, URBAN SPACES**

DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES  
Presence of Local and Global References in Public Spaces



## PUBLIC SPACES. URBAN PLACES.

### I | Urban design

The land in the city has to be used efficiently, local traditions should be kept, and negative environmental impacts should be decreased to a minimum. High architectural standards should be one of the most important things if we talk about public spaces between buildings which are areas where people move, act and meet (Urban Task Force, 1999). From old city districts to the new low density suburbs create our environment where we should pay attention to a quality of design (Urban Task Force, 1999). "One of the best ways to attract and absorb more people into urban areas is to reduce the need for car travel. ... This is needed order to decrease tension on the roads and connect places independently, without mechanical vehicles. Car parking space absorbs vast tracts of urban land that could be better used to improve urban services and the environment. Residential parking in new urban development should be kept down to one space per dwelling. Where people do wish to drive and park, then the environmental costs of this choice should be reflected in car parking charges" (Urban Task Force, 1999).

Urban design is the art of making places for people. It includes the way places work and matters such as community safety, as well as how they look. It concerns the connections between people and places, movement and urban form, nature and the built fabric, and the processes for ensuring successful villages, towns and cities (By design, CABE, 2000). Good design can help create lively places with distinctive character; streets and public spaces that are safe, accessible, pleasant to use (...) (By design, CABE, 2000).

Urban neighborhoods should be attractive places to live. This can be achieved by improving the quality of design and movement creating compact developments, with a mix of uses, better public transport and a density which supports local services and fosters a strong sense of community and public safety (Urban Task Force, 1999). One of the items of Urban Task Force group work was committing a minimum of 65% of transport public expenditure to walking, cycling and public transport over the next 10 years.

According to the research of Burgers (2000) urban employees frequently experience gradual transitions from work to leisure time. They do not solely make and maintain their contacts at conference rooms in office buildings, they talk to each other at pubs or restaurants, and wherever they gather in the vicinity of traffic junctions. The contacts vary from explicitly scheduled and carefully

directed conferences to chance meetings at locations where people come to associate with others who share their ideas and with members of their social and professional group and relevant others (Burgers, 2000).

## II | Public Spaces

### II. I | Meaning of public spaces

It is already a long time that public spaces are considered to be the main components of urban life. Last centuries more spaces have been given for closed shopping malls, festival places, corporate plazas and etc. According to Boyer (1993), Madanipour (2000) they have become the main core of attention of architects for already more than three decades. But nowadays people started getting tired of marketing and commerce and they try to spend much more time with the nature. No matter how much higher points the civilization achieve in the technology of commercialized public places, people still prefer natural spaces their origins came from.

What can give us public spaces? It literally forms psychology, society, economics, aesthetics, ecology, politics. For sure geometry of each city is created by both, private and public areas. But the main role in forming city centralities, city structure are the second ones.

In the last quarter of the XX century increased the number of renovated public spaces (Gehl, Gemzoe 2003). Streets, boulevards, avenues are the main communication channels of the city (Gehl, 2001). They are one kind of the movement between people, buildings from one zone to the other and serve the daily routine. Public spaces can contain different street needs as street signs, lights and different hardscape elements (Lynch, 1991). Practical use of signs and symbols can be very useful with the aim of transforming city to an intellectually open system. For example, Francesca Arici in her work for Joint PhD Seminar indicates by giving as an example the Central Park in NYC, piazza del Campo in Siena, Duisburg Park in the Ruhr Valley, of the just finished High Line park in NYC with high amount of skateboard spaces, social centers, new experimental forms of public design (fig. 1) or, arguably, of the internet (the alleged killer of public space) which supposed to be a useful tool to intensive communication, to facilitate civic debate and effective citizenship. According this title Madnanipour says that that one of the reasons for the interest in one or another place is increased despatialisation of activities which means that new technologies of communication

## DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES

### Presence of Local and Global References in Public Spaces

allowed it possible for the information, as well as news, money, goods, to be exchanged without close contact.

Day by day satellite technology had been developed and became a constant flow of global communication and started to rival and even outweigh the word of mouth as an approach of communication among large numbers of people. Staying inside a close place people can now earn money, buy products, share their minds in social networks without need to go out from the door which precisely shape the social relationships and their outside manifestation (Madanipour, 2001). These things are the reasons of spontaneously and freely unfolding of unexpected events. The notion of "public space" subscribe an enduring human attitude to socialization, makes people to be able to share values, affects the recreational dimension of social life (Understanding the Post-Industrial City: Metropolis, Urban Renewal and Public Space, 2009).

**Figure 1 |**  
Experimental road signs  
| Understanding the Post-  
Industrial City 2016



**Figure 2 |**  
Avenida da Liberdade,  
Braga (L)  
| Miren De Andrés, 2016



**Figure 3 |**  
The Rio Mondego,  
Coimbra (R)  
| Afat Mammadzada, 2016



Equally important role (to physical role) of public spaces is ecology. Nowadays ecology, sustainability, energy efficiency are the center of attention for everyone related with this sector. Greenings can bring favorable microclimate, filter dust particles, provide cooling, prevent strong winds (fig. 4, fig. 5 - good examples to show ecological and aesthetic contributions of public spaces).

DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES  
Presence of Local and Global References in Public Spaces



| **Figure 4**  
Garden of Galouste  
Gulbenkian (L)  
| Afat Mammadzada, 2015



| **Figure 5**  
Dolina Roz, Kislovodsk,  
Russia (R)  
| Afat Mammadzada, 2015

The role of the public spaces in the psychology of the population has also to be mentioned. They can be both, a treatment for the society and the core of spark of the negative emotions. What can cause psychological irritation? Car parking and car traffic gradually assign spaces in squares, streets (Gehl, Gemzoe, 2003). Depleting of city life is the reason of dirt, noise, visual pollution which can irritate community. It is becoming a reason of a reduction of interest in people to get around on foot, spend time in public places. Let's agree that it is not so pleasant to move between maneuvering and parked cars.

We can say that public life is forming an urban quality. The scenes of the urban environment people see when they walk along affect on their mood in attractive walking routes and places to stop along the way (Gehl, Gemzoe, 2003). And it causes the transformation of the particular space from the place where people won't to walk and get positive emotions to the one where they just have to pass to reach the object or point they targeted to go and automatically decreases an amount of social and recreational activities. That becomes a reason why local people avoid going to the city center and population there basically consists of tourists.

Positive effect can be reached by providing the rhythm of relaxation and tension. It is single-mindedly desirable for psychological and mental health (Lynch, 1991). People go out to rest and keep distance with stresses of daily life. It can be referred to its role in formation of society.



| **Figure 6**  
Potters Fields Park ,  
London (L)  
| Afat Mammadzada, 2015



| **Figure 7**  
9<sup>th</sup> April Garden,  
Lisboa (R)  
| Afat Mammadzada, 2014

We can call public spaces also "arenas of social interaction". They may serve as meeting points and locations where different groups of people regardless of their ethnic origin, class, gender and age to be in touch with each-other. Open spaces are all these localities in the environment which people can freely choose and act spontaneously: "public meadows and parks, but also unfenced vacant lots and abandoned waterfronts opened for grassy slope; or kind of movement, as a prairie or unobstructed wood; roving eye, as a vista or the open sky" (Lynch, 1991). People choose the place individually according to what allows them to realize things they are interested in and also gives them the degree of economic status. With regards to the designer, he provides open space - he devices plastic forms "which adapt themselves easily to a great variety of behaviors, and which provide neutral but suggestive material for spontaneous action" (Lynch, 1991). Open spaces can satisfy all branches of generation tree. As well as grandfathers and grandmothers spend their time in small places of relaxation and recreation, adolescents try out different activities, bring out from themselves various skills. With all its diversity, open spaces can be good places for such trial runs.

Almost all cities have local type of open public spaces. Big metropolis cities can have huge green avenues as well as compact cities privileged will have small squares. The idea of "openness" in open-space plan should work for a person to also be "open to choice, open to active use and manipulation, open to view and understanding, open of access, to new perceptions and experiences" (Lynch, 1991). Burgers (2000) notes that sport and cultural events, such as football tournaments, festivals, carnivals, flea markets, circuses and fairs, which have been organised for city promotion and city marketing have made public spaces popular once more.

Another role of public spaces is economic role. Since a long time commercial activities started to take part in the universal public arenas (Gehl, 2001) (fig. 8, fig. 9).

**Figure 8 |**  
Plaza Sol, Madrid, Spain  
(L)  
Afat Mammadzada, 2014 |



**Figure 9 |**  
Estoril, Portugal (R)  
Mário Novais's Studio |



It would be wrong not to mention political role of public places. Squares and streets are places where people can share their political view and it causes the democracy. They can either agree or disagree by making their voices heard and by discussions.

## II. II | Public spaces of the industrial cities

And what about public spaces in industrial cities? Changed view of the industrial city caused also changes of public spaces, one of which is "decentralised, self-referential and inward-oriented retail units". For example, shopping malls first appeared in 1950's by "retailing functions" outside the central city (Carr, Francis, Rivlin, Stone, 1992). And those places first times in the main were accessible by car. They were connected to each other through streets and few of them mixed commerce with leisure (Z. M. A. Ercan, 2007, referring to Punter, 1990).

In the post-industrial cities flyovers, underground tunnels were counting as spaces for social interaction. For example, let's see some references from Middle Asia. Baku (Azerbaijan) for many decades was an industrial center of Soviet Union and one of its main port-cities. Funicular was considering a public space there.



| **Figure 10**  
Funicular, Baku,  
Azerbaijan (L)  
| anonym, 1990's

| **Figure 11**  
Funicular, Baku,  
Azerbaijan (R)  
| anonym, 2013

"Gated developments" is one of wonderful specifications of the post-industrial city. Gated streets and electronic cares, electronic cares, inward-oriented design, dead-end streets and single-entrances, create public spaces with extremely restricted accessibility (Z. M. A. Ercan, 2007, referring to Punter, 1990). Those and specially suburban residential areas in the US, "planned unit developments" (PUDs) or the walled housing sites in the center meet the housing needs of "yuppies and dinkies" (double-income-no-kids) are such

<sup>[1]</sup> The official website of "White City" -  
[www.bakuwhitecity.com](http://www.bakuwhitecity.com)

developments (Z. M. A. Ercan referring to Punter, 1990). Those "gate developments" and other different public spaces are cleaned from unwelcomed groups and activities with an eye to hold the exclusivity and to keep the property values of those estates (Z. M. A. Ercan referring to Punter, 1990). Another, difference of the public spaces from "gated" residential developments, is that there are less science or business parks in the second ones. Office and residential uses of present land as well as the new evolution have isolated themselves off from other parts of the city and took from public use (Z. M. A. Ercan referring to Punter, 1990).

One example of completely changed industrial part of the city: "Black City, as a legacy of the first oil boom and the result of urban events of the distant past, was formed in the late 19th century in the eastern part of Baku. Subsequently, he played an important role in the oil industry for more than 100 years, carrying out activities for the processing, storage and transportation of "black gold".

Currently the industrial space of the Black City located in the center of Baku bay offers an unprecedented perspective on the revival. The space in the east of the city center on the territory of 221 hectares, surrounded by a dynamically developing urban infrastructure gets a chance to be reborn to his new mission and become one of the most attractive investment opportunities." <sup>1</sup> And "Black City" transforms to a "White City".

It consists of "Green Island" which is residential district with its own public spaces greened streets, gardens; Babek District - the biggest one on the area, in the middle of which will be situated (the construction process is still continuing) a big square dividing the district in eastern and western parts; one big business center; and the main public area of White City - Fountains Square which will have an trade center with concept of Open Mall and connected underground parking and a new metro station. This Fountains square to the North goes down to the Caspian Sea and connects by a pedestrian bridge to the trade center in Baku Seaside Boulevard.

**Figure 12 |**  
Black City, Baku (L)  
anonym, 1890 |

**Figure 13 |**  
White City, Baku (R)  
|www.bakuwhitecity.com|  
2012



### III | Streets and boulevards

Streets and their sidewalks, the main public spaces of a city, are its most vital organs. Think of a city and what comes to mind? Its streets. If a city's streets look interesting, the city looks interesting; if they look dull, the city looks dull (Jacobs, 1993).

Relatively to scale and number streets are exceeding public utilities, equivalent of water lines, sewers, electric cables, linear physical spaces (Jacobs, 1993) which allow people and goods to get from one point to another. They balance form, structure urban communities. Their proportions, orientation, angle of slope can accept or deny light and shade. As a guide shafts streets may serve as nets for focusing attention on one or few centers or objects; if there is a river a street holds an attention on its edge along it (fig. 33, fig. 34).



| **Figure 14**  
Avenida da Liberdade in  
1898 (L)  
| Mário Novais's Studio

| **Figure 15**  
River Seine, Quai de  
Grenelle, Paris (L)  
| Afat Mammadzada, 2014

It's clear that people in most cities citizens are not able to own private gardens and they don't have direct access to parks. In this case streets are making up the notion of "outside" for many people. And streets become social meeting, communication points with other people. Streets are directions orientating people, where they can pass and familiarize faces, forms, figures, postures and dresses (Jacobs, 1993). Regardless of the economic condition everyone uses streets, stands or walks there and admires the scenes (not always pleasant). Streets are major *public spaces* to develop sociability in cities (Jacobs, 1993).

Some of the well-known and best streets are boulevards (basically multi-way boulevards). But what are safeness and riskiness of them? Jacobs as a source indicates American traffic-engineering wisdom which view those streets as insecure, first of all because of the complicated intersections which are result of the multiple roadways (Jacobs, 2002).

Jacobs as an example showed two streets in NYC which shows the role of pedestrian meridian. They are crossing Ocean Parkway and Grand Concourse. Let's consider three major



DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES  
Presence of Local and Global References in Public Spaces

differences between these two boulevards. Two of them are caused by measurements of the access roadway and the medians, third - in the way traffic on the access lanes.

access roadways: Grand Concourse - wider (two moving lanes of traffic and only one parking lane and the Ocean Parkway - one through lane and two parking lanes);

medians: Ocean Parkway - wider (planted more regularly and densely, include benches and a bike path);

access road control: Grand concourse - traffic lights, Ocean Parkway - stop signs at every intersection.

"The second major difference in the way these streets are used is captured by their patterns of pedestrian movement. While there are more pedestrians on Grand Concourse than on Ocean Parkway, most of them only cross the street and are not likely to walk along it for any distance, whereas more people walk along Ocean Parkway than cross it. Even more significant is the heavy use of the medians on Ocean Parkway as places to walk and sit. The medians on the Grand Concourse are virtually unused.

...

Analysis of their accident data shows that while Ocean Parkway has an accident rate similar to that of the Grand Concourse, with regard to pedestrian accidents the parkway is three times safer. Moreover, detailed accident-location maps indicate that the majority of pedestrian accidents on the Grand Concourse occur on the access roads" (Jacobs, 2002).

**Figure 16 |**  
Pedestrian realm in  
Ocean Parkway  
| A. B. Jacobs, 1993



DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES  
Presence of Local and Global References in Public Spaces



| **Figure 17**  
Pedestrian realm in  
Grand Concourse.  
| A. B. Jacobs, 1993



There are three medians which create the boulevard: the sidewalk, the access roadway and the planted median. And besides the pedestrians it encourages drivers inside the whole movement and makes them to go very slowly and respect the pedestrians using the street (Jacobs, 1993).

The conclusions about the necessary conditions for emergence of pedestrian realm: continuously medians between through lanes and the access lanes; a line of planted trees along those medians till the intersection; more or less narrow roadways which let

## DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES

### Presence of Local and Global References in Public Spaces

only one lane of traffic (which are controlling by signs at every intersection); the location of such small points as kiosks, benches, bus or tram stops (because people need to cross the sidewalk to achieve them); access ways that differ from the main thruway realm by a change of height (level) and paving.

These all conditions provide the safeness of pedestrians. But their observation shows that their walk there is seldom despite a slow movement of cars.

DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES  
Presence of Local and Global References in Public Spaces

## **III | CHAPTER II**

### **SINES**

DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES  
Presence of Local and Global References in Public Spaces

## SINES

### I | Sines - history. City dwellers' point of view.

"In November 24, 1362, Dom Pedro I approved the elevation of the village of Sines, with one condition: the construction of a defensive fence, Castle. (...) "(Câmara Municipal de Sines, 2008).

If we review the history we can clearly see the chronology of attempts of improvements by the government in Sines. In XVI century the government of that period have started to the process of new project in Sines (Museu de Sines). The project was about building the new port. But because of the attack from England, the process was stopped and wasn't completed.

Central Government always had a plan for Sines. They made a square like Terreiro do Paço in a small scale, have planned a big industrial port for energy trade purposes.

The government expropriated all center of Sines and owned all the territory. Sines has become one the best industrial port cities in Iberia. The beach has a very good memory. It is the best beach of Alentejo in the opinion of local people. "They created a pear, - they say - thousands of stones had been used." The original beach has disappeared. It had been hidden under the road in front of the castle in 1970. The original plan was multipurpose port. Consequence of that idea became a revolution in 1974 - the concept of which was to keep the natural plan of Sines.

From the middle of XX century, people started getting concerned, dissatisfied with decisions taken by public authorities about the rehabilitation works carried out in Sines.

From some photos and the old generation we can see and hear the north part of the city have always been wilder and uninhabited.

## II | Sines - an Industrial City

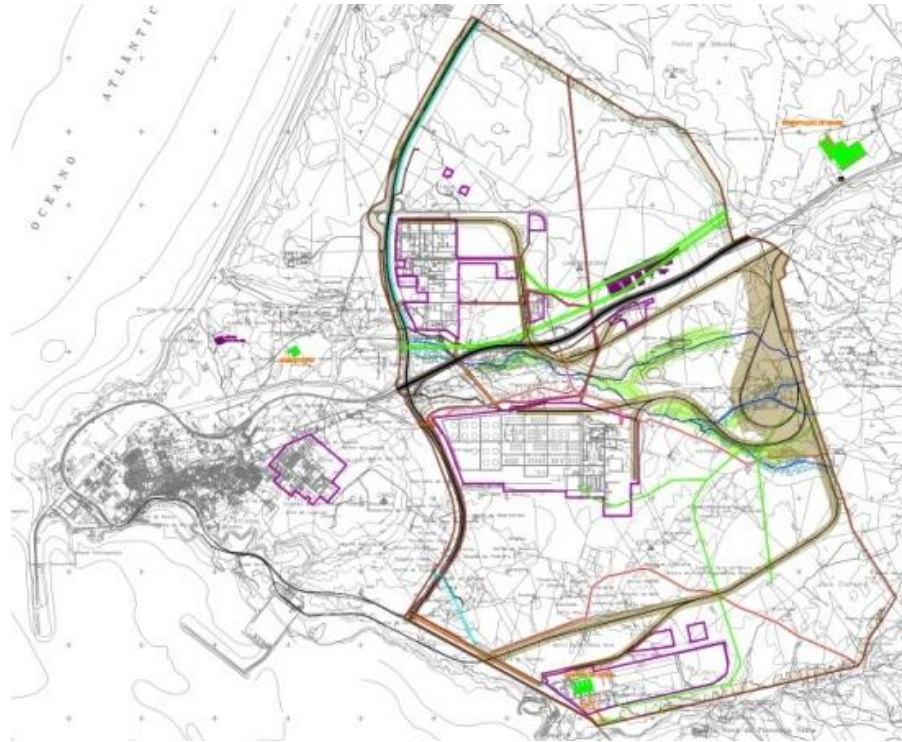
(...) The twentieth century begins almost with the municipal restoration in 1914. The cork industry, fishing and some agriculture and tourism are the basis of Sines life until the end of the 60s, when, in addition to the proximity of the sea, Sines is hardly distinguished from the rest of the Alentejo.

The large industrial complex is being created by government of Marcello Caetano in Sines in 1970. The population expands and diversifies, the landscape gets new configurations and the community struggles to keep their integrity and the quality of life, mitigating the negative impacts of installation of new units and taking advantage of the positive. (Camara Municipal de Sines, 2015)

Sines is an expanding municipality and a strategic place for Portugal. It has an ideal location for developing and creating global impact on industries. As the primary national port its able to handle any type of cargo and is entire port for strong materials. Its role stands in the energy sector and in the world of shipping containers with several direct services linking Sines with the main production and consumption regions of the globe. With an articulated and complementary train shipment and the use of road and rail transport strategies Sines port is currently responsible for the largest number of container trains per year in the Iberian Peninsula. In addition to the the energy and petrochemical industry it also beds on renewable energy sites which is a significant factor in transforming the municipality into one of the main drivers of the national economy. In addition Sines is located on the wild landscape environment: fishing and tourism as well as unique living species makes it an attractive spot for international audience. An extensive coast of fine beaches makes it perfect for the practicing water sports it is a tourist destination of excellence where you can find one of the only recreational ports of the entire Alentejo coast. The sea is a source of development. Sines is the main fishing port of the region and one of the most important of the country. Sines - the gateway of Portugal and the world(...) ([www.corredorazul.net](http://www.corredorazul.net), commercial video, March, 2014).



**Figure 18 |**  
Map. Condition plan  
of Sines.  
Cartography of the |  
Municipality of Sines,  
2015



 Existing Industrial zone

(...)The twentieth century begins almost with the municipal restoration in 1914. The cork industry, fishing and some agriculture and tourism are the basis of life of Sines until the end of the 60s, when in addition to the proximity of the sea, Sines is a little bit distinguished from the rest of the Alentejo. The large industrial complex created by Marcello Caetano government in Sines in 1970 changed the county. The population expands and diversifies, the landscape gets new settings and the community struggle to keep their integrity and the quality of life, mitigating the negative impacts of the installation of new units and taking advantage of the positive(Câmara Municipal de Sines, 2015).

### III | Public Spaces and Urban Places in Sines

Jardim das Descobertas. Built in the late 1980's, the Garden of Discovery is located on the western edge of the old line of road-rail, next to Avenida General Humberto Delgado and the Sports Pavilion. With an area of 7400 square meters, the garden is located in a zone of occupation for services and trade. It has gazebo and part of the small building of Espaço Sénior do Jardim das Descobertas (Camara Municipal de Sines, 2015).

DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES  
Presence of Local and Global References in Public Spaces

The garden has a regular geometry in its plan which is not so typical for Portugal. An artificial longitudinal pond, alcove and small bridges above the pond colored in red remind more eastern garden architecture. But trees (majority of which are palms) and pavement bring us again to tropical Portugal. Dwelling in Sines are distributed onto private houses and apartment building as in many southern cities in Iberia. Jardim das Descobertas is surrounded by basically four-storey houses creating a sharp difference of heights. Situating on a central part makes the place the closest public garden to the center. In spite of that, other gardens are always more populated. Main visitors of the garden are generally older generations.



| **Figure 19**  
Jardim das Descobertas.  
View 1 (L).  
| Afat Mammadzada, 2016

| **Figure 20**  
Jardim das Descobertas.  
View 2 (R).  
| Indicated website



| **Figure 21**  
Shuangxi Park and  
Chinese Garden, Taipei,  
Taiwan  
| Peter Bronski, 2007

Jardim da Alameda da Paz. Following the path of the old line of the rail road between the Jardim das Descobertas and a Baixa de São Pedro, total area of 30,000 square meters, the Alameda da Paz is the great urban park in the north of the city. Adjacent to the park is located in the old station road-rail, currently working as an art school (Camara Municipal de Sines, 2015).

Located in the entrance part of the city this garden creates a continuing green line from the entrance till the Jardim das Descobertas. The area has a good amount of sport equipments and the football field. A flat relief of the area, small number of trees and empty grass areas don't add any specificity.

## DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES

### Presence of Local and Global References in Public Spaces

**Figure 22 |**  
Jardim da Alameda da  
Paz. View 1 (L).  
Francisco Oliveira, 2014 |



**Figure 23 |**  
Jardim da Alameda da  
Paz. View 2 (R).  
Francisco Oliveira, 2014 |



Jardim da Boavista. Small public garden (1496 m<sup>2</sup>) located in Largo da Boavista, a central area of the city next to the Av. Humberto Delgado (Camara Municipal de Sines, 2015).

This garden is a continuation of the Jardim das Descobertas and at the same time its transition to the Jardim da Alameda Paz.

**Figure 24 |**  
Jardim da Boavista.  
João Plácido, 2012 |



Jardim da República. Also called "Rossio", the importance of centrality that had since it was built in the first half of the twentieth century, the Jardim da República de Sines is now a part of a trade area, services and housing, about 200 m north of Paços do Concelho. The garden by itself is not very large (3033 m<sup>2</sup>), has tall tree species already many years (palm trees and pines), which presence is very strong (Camara Municipal de Sines, 2015).

The most traditional geometry among the gardens of Sines has the Jardim da República. The pavement, trees, flowerpots are very typical for that zone of Portugal. It situated near the international

DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES  
Presence of Local and Global References in Public Spaces

and intercity bus stop and to access the historical center of the city is being realized through this garden. Internal architecture can be comparable with some gardens and viewpoint squares of Lisbon.



**Figure 25 |**  
Jardim da República.  
| Afat Mammadzada,  
2016

Jardim das Escadinhas do Muro da Praia. Terraced garden formed by a set of levels connected by stairs and crossed by an undulating path. Built on the cliffs in the early twentieth century, it is a historical important space and memory of the city of Sines - an important connecting shaft between the old town, the beach and the sea. Own viewpoint to the bay (Camara Municipal de Sines, 2015).

This garden is one of the main connections between low beach point and high historical point. Also is typical for coastal cities (locating in a relief) and is one of the viewpoints of Sines.



**Figure 26**  
View from Jardim das  
Escadinhas do Muro da  
Praia (L).  
| Silvanna & Rui, 2010

**Figure 27**  
Jardim das Escadinhas  
do Muro da Praia (R).  
| Silvanna & Rui, 2010

Jardim Público de Porto Covo. Opened in late summer 2003, it has a hectare area and a half and it fits a wide lawn, casual tops for

practice games, a belvedere, a marginal route for pedestrians, roller skates and bicycles, a small square, a park for children and parking lots. Located at the entrance of the village (1109 municipal road), near Praia Grande, overlooking the Atlantic. In 2012, it was enriched with the Picnic Park Arnaldo Vilhena (Camara Municipal de Sines, 2015).

As an empty and flat area it is not so typical for Portuguese landscape architecture. It can be referred to northern garden types. Situating far relatively with the other gardens above it is not so easy achieve the place without car.

**Figure 28 |**  
Jardim Público de Porto  
Covo  
François Mauriac |  
2011



DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES  
Presence of Local and Global References in Public Spaces

## **IV | CHAPTER III**

### **REHABILITATION. THE LIGHTHOUSE**

DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES  
Presence of Local and Global References in Public Spaces



## REHABILITATION. THE LIGHTHOUSE

### I. Case Studies

Delaware Bay lighthouse rehabilitation. New Jersey.

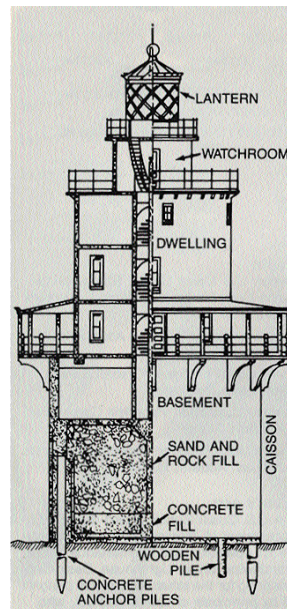
Owner: U.S. Coast Guard, Shore Maintenance Detachment; Governors Island, New York.

Design engineer: Duffield Associates, Wilmington, Delaware.

The lighthouse in the Delaware Bay, Brandywine Shoal Lighthouse stands 7 miles west of Cape May, New Jersey. It is the first reinforced concrete structure of its kind located on a submarine site in the continental United States. The historic structure was recently rehabilitated with several types of concrete to assure its ongoing serviceability in a harsh environment. The Hennebique Company of New York designed the lighthouse, and the Interstate Construction Company of Mobile, Alabama, built it between 1912 and 1914. It is made up of a series of decreasing concentric cylinders. The three-level, 26-foot-diameter, cast-in-place concrete dwelling supports a watch room and an iron lantern and is founded on a precast 35-foot-diameter caisson 18 1/2 feet high. The structure rises about 80 feet above bay Mudline, approximately 65 feet above mean high water.

Combination section and elevation shows original caisson, dwelling level, watch room, and lantern. Marine exposure and extreme thermal variations contributed to deterioration of the concrete.

**Figure 29 |**  
Delaware Bay lighthouse  
section  
Text source |



DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES  
Presence of Local and Global References in Public Spaces

The Brandywine Shoal Lighthouse restored and painted in traditional colors, is operational but no longer manned. One-time home of the lighthouse keeper is the second concrete cylinder, three stories high with a concrete veranda on all sides. The lighthouse received many modifications throughout its life as a manned structure, including application of shotcrete to the entire caisson from the mudline up, and to the soffit of the first level deck, the veranda columns, and the veranda roof. Harsh environment, age, and loss of daily maintenance when the light was automated all took their toll on the reinforced concrete, and in 1982 an inspection was started to determine the extent of repairs needed.



| **Figure 30**  
Delaware Bay lighthouse  
| Text source

Repairs were completed in March 1987. Success of the project was recognized by the Prestressed Concrete Institute with presentation of a special jury award in its 1987 Professional Design Awards Program.

Lighthouse-beach hut. Pablo Bronstein – London artist, has created a combined lighthouse and beach hut for the Folkestone Triennial, incorporating exaggerated features that reference the work of 18th century architect Nicholas Hawksmoor.

Beach Hut in the Style of Nicholas Hawksmoor was designed as an homage to the architectural vocabulary of the Baroque architect. It is located on the beach of the English seaside town.

## DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES

### Presence of Local and Global References in Public Spaces

**Figure 31 |**  
Lighthouse-beach hut.  
View 1  
Text source |



Pablo Bronstein chose this particular style to fill a gap in Folkestone's architectural history, which he says includes only buildings from the late 18th and early 19th centuries, up until the present day.

The artist explained in interview that essentially it is a monument made of wood that evokes various other periods in architectural history.

"If you look back at the history of architecture and you think that there are certain buildings that should have been built but weren't, or certain sorts of building that would have been fun if they had been around but weren't," he said (DeZeen Magazine, 2014).

Staying alongside the colorful beach huts that are typical of English beaches, the grey-painted structure features a bright red door, yet visitors aren't able to go inside.

The structure was built using a steel frame construction a marine plywood. It is the artist's first major public sculpture in the UK (Folkesyone Triennial, 2014).

**Figure 32 |**  
Lighthouse-beach hut.  
View 2  
Text source |



DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES  
Presence of Local and Global References in Public Spaces

Following lighthouse hotels from around the world can be a good reference to present project.

Harlingen Lighthouse, The Netherlands. The Harlingen Lighthouse is a unique choice in that it's an urban lighthouse, situated in the heart of the historical Harlingen city docks near the city center. The Art Deco inspired tower has been converted to a luxury three level suite. Originally used to guide shipping traffic through the bay to the open ocean beyond, the design has converted all levels of the building into a hotel while retaining the nautical theme. The lighthouse offers a 360 degree panoramic view, and the top floor of the building tells the story of its history.



**Figure 33**  
Harlingen Lighthouse,  
The Netherlands  
| Text source

Lundy Island, United Kingdom. Designed by renowned architect and civil engineer Daniel Asher Alexander, this lighthouse was completed in 1820. The entire island is a nature preserve with a medieval castle and three lighthouses. Guests can stay in the lighthouse, around the castle, or in a stone refuge called Tibbets.

**Figure 34 |**  
Lundy Island, UK  
Text source |



## II. The lighthouse of Sines

The lighthouse of Sines is Silva Pereira's project, approved in 1870 also provided the basis for the creation of lighthouses in Montedor, Leca or Leixões, Aveiro, NS da Vitória (later passed over by Penedo da Saudade), Cabo Sardão, Cabo Carvoeiro in the Algarve and Ponta de S. António (V. R. S. António) (Autoridade Marítima Nacional, 2016).

The lighthouse began operating in April 1880, with a tower 22 meters height and 41 meters of altitude (Autoridade Marítima Nacional, 2016).

With the intention to install a beacon, in 1948 a house was built (Autoridade Marítima Nacional, 2016).

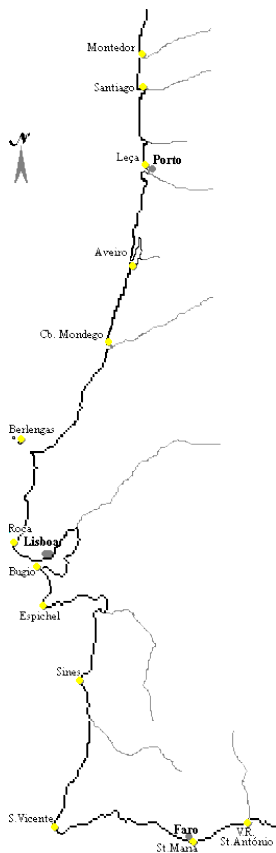
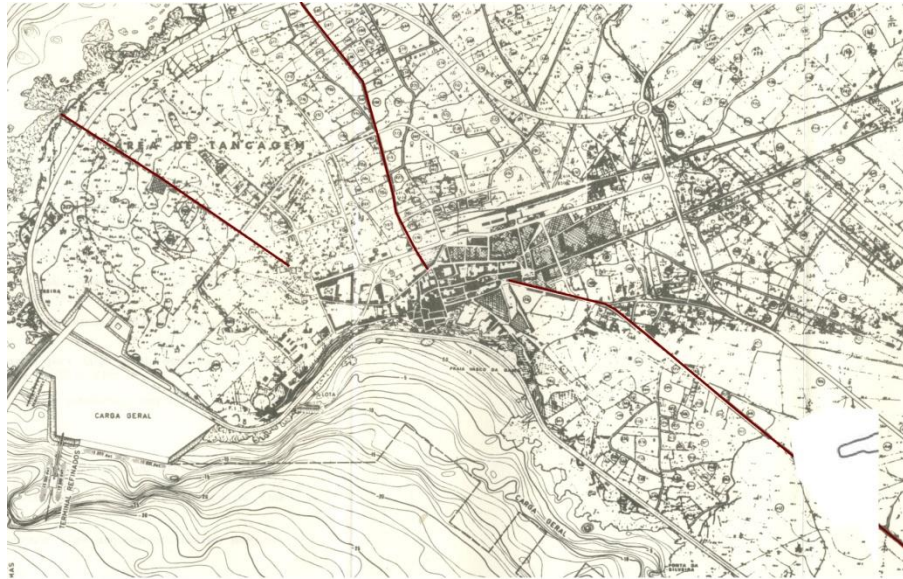
What does the lighthouse complex consist of? The lighthouse is opened for a visitors once a week for three hours (information from Marinha, 2011).



**Figure 35 |**  
The main building of the  
lighthouse.  
Afat Mammadzada |  
2016

According to the history we can see that even one of the 7 wonders of the world is a lighthouse (Egypt). That tells how meaningful they are for their cities. In case with the one which is in Sines its location is not accessible and it is not being viewed from other points of the city. Capitanía which is not far from the historical center has the access there only by car. It is separated from the city by huge pipeline where always work of any sort is carried out and that zone is in industrial area. The area had been divided to private green fields with long native grasses. The access to the Northern beach is being realized also through the Highway. And there is the only bridge connection above the tube line which is situated far from the lighthouse and historical center and provide vehicles. If we look at the map before XX century we will see three main paths (f. 30). The most filled one was the one in the middle which had also disappeared by time.

**Figure 36**  
Old paths.  
Camara Municipal  
de Sines.



**Figure 37 |**  
Lighthouse line  
ANC |

What about the other lighthouses in Portugal? The tower of Sines lighthouse is white and cylindrical with 22 m of height and has 2 tiers and annex.

Starting from the north I will mention 13 lighthouses to compare(ANC).

Montedor. Prismatic tower with annex building and antenna conspicuous TV. Red dome. 28 m height(ANC).

Santiago. Red cylindrical tower with white figures and flashlight. 6 m height(ANC).

Leça. White cylindrical tower with black narrow bands with outbuildings. 46 m height(ANC).

Aveiro. Frustoconical tower with white and red stripes and outbuildings. 62 m height(ANC).

Cabo Mondego. White prismatic tower with annex building. 15m height(ANC).

Berlenga. White prismatic tower with outbuildings. 29 m height(ANC).

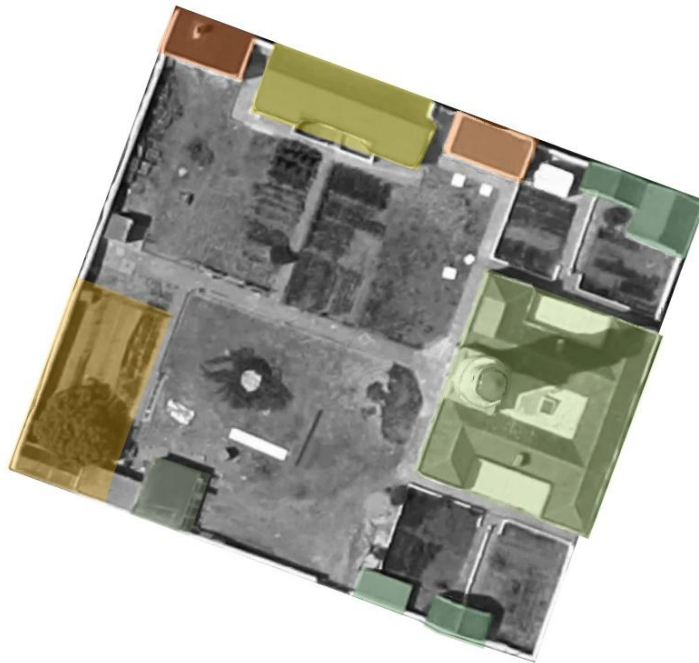
Cabo da Roca. White prismatic tower with outbuildings. 22 m height(ANC).

Bugio. Cylindrical tower with green dome. 14 m height(ANC).

Cabo Espichel. White prismatic tower with annex building topped by red cylindrical flashlight. 32 m height.

Cabo de São Vicente. White cylindrical tower with annex building. 28 m height(ANC).








Cabo de Sta. Maria. White cylindrical tower with gray amounts surmounted by red cylindrical flashlight. Annex building. 46 m height (ANC).



| **Figure 38**

The territory of the lighthouse.

| Indicated website,  
Changed by an author,  
2016

-  Light control equipment
-  Lighthouse building
-  Office building
-  Small farm
-  Kitchen
-  Summer house
-  Garage

As had been mentioned in a figure 38, the complex has the main building - with the tower. It consist of four individual blocked flats with separated entrances - two in North, the other two in South - in which Marina workers stay alone or with their families for whole working period (f. 35). The main façade has the entrance of the tower entering from which you find yourself in a hall with control panel and spiral staircase to achieve the top of the tower (f. 39). At the same time there is a house of summer residence of the workers facing to South with (f. 40). The construction has a beautiful architecture with a nice terrace tended to Sines. A small separated structure near that house is a kitchen with an old furniture and stove where workers spend a lot of time (f. 41). Small office building has all documentation and archive related to the lighthouse (f. 42). the rest of the buildings (except a small toilet and a closed garage in the South) are equipment buildings one of which has a big generator in case of the accident with the energy in for the light (f. 43). Since Sines is a village, the workers couldn't been spared without a small garden



DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES  
Presence of Local and Global References in Public Spaces

where they grow some vegetables (f. 44) (the information is from Capitania de Sines - the owner of the lighthouse of Sines).

**Figure 39 |**  
Tower of the lighthouse.  
Afat Mammadzada, |  
2016



**Figure 40 |**  
Summer house.  
Afat Mammadzada, |  
2016



**Figure 41 |**  
The kitchen of the sum. h.  
Afat Mammadzada, |  
2016



**Figure 42 |**  
Office b. of the lighthouse.  
Afat Mammadzada, |  
2016



**Figure 43 |**  
Surrounding buildings.  
Afat Mammadzada, |  
2016



**Figure 44 |**  
Small garden.  
Afat Mammadzada, |  
2016



DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES  
Presence of Local and Global References in Public Spaces

## V | FINAL PROJECT

DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES  
Presence of Local and Global References in Public Spaces

## FINAL PROJECT

### I | Program

The program had been created according to the "Concurso Premio Universidades Trienal de Lisboa Millennium bcp" competition in 2016. It has started in the first semester of the year 2015-2016. As a theme had been chosen "Sines - Urban Core, Industry and Structure of the port city".

Sines as an industry has a fishing port, central thermoelectric and refinery and a theme for debate the socio-political meaning of the industry. And one of the things that can activate this latent is architecture. 0 proposed exercise involves integrating the advantage processing of existing resources, the relationships and contexts that exceed the scale of the own territory and immediate time, allowing to demonstrate the capacity of architecture. The question is: "how and what an architecture can involve in productive mechanic of logistic infrastructure? How in one dominant context of large size one can think about shared use and border spaces between city and a coast line? How to face, occupy and transform administrated spaces by strict functional criteria conditioned by security reasons and administered by principles of maximum profitability.

Sines is a revelator place of paradoxical imaginaries: on the one hand an industrial apparatus is a limitation to new forms of occupation functions; in other, opens an enormous potential of intervention. This condition opens space for a critical action through an architectural project that lets a definition of the new programs, incorporation of the time of using of the place, consideration of resilience of the programs and spaces of production and complementary between living and produce functions <sup>[1]</sup>.

The work of the first semester consisted of a big research process in which students got acquainted with the city, its surrounding, citizens, their activities, the port, the role of the port. This project is about creating the connection of the city with the North beach which is not accessible by pedestrian track (Considering the dimension, it is possible to get there on foot, the closest point of the city is 500 m). The "Northern Sines" has such a diamond of its kind, a lighthouse. It is situated in a very inaccessible location.

<sup>[1]</sup> Trienal de Arquitectura de Lisboa, O Concurso Premio Universidades Trienal de Lisboa Millennium bcp 26, Jun, 2015

## II | Rua Floresta

The project consists of two steps one of which is a regeneration of an urban area and the second - rehabilitation of public sight. More precisely. Rua Floresta is one of the old roads in Sines which in past already had a connection role. From both sides it is surrounded by private houses with low fences. The road has 20 meters and more of width and in both sides it has parking lots and grass. The axis of Rua Floresta crosses nearby the lighthouse and create a good opportunity to be one of the important roads of the city as a boulevard.



| **Figure 45**  
Rua Floresta  
| Afat Mammadzada,  
2016

The distance across the road lets us plan such meridians as pedestrian line, tree line with benches, cycling line, running path, parking, one way road and again parking, tree and pedestrian line. Green line had been planted with trees referring to the project of the group of Spanish architects.



| **Figure 46**  
Planted road plan,  
Milladoiro  
| Luis Ponte Lavandeira,  
2007 - 2010

**Figure 47 |**  
Planted road,  
Luis Ponte Lavandeira, |  
2007 - 2010



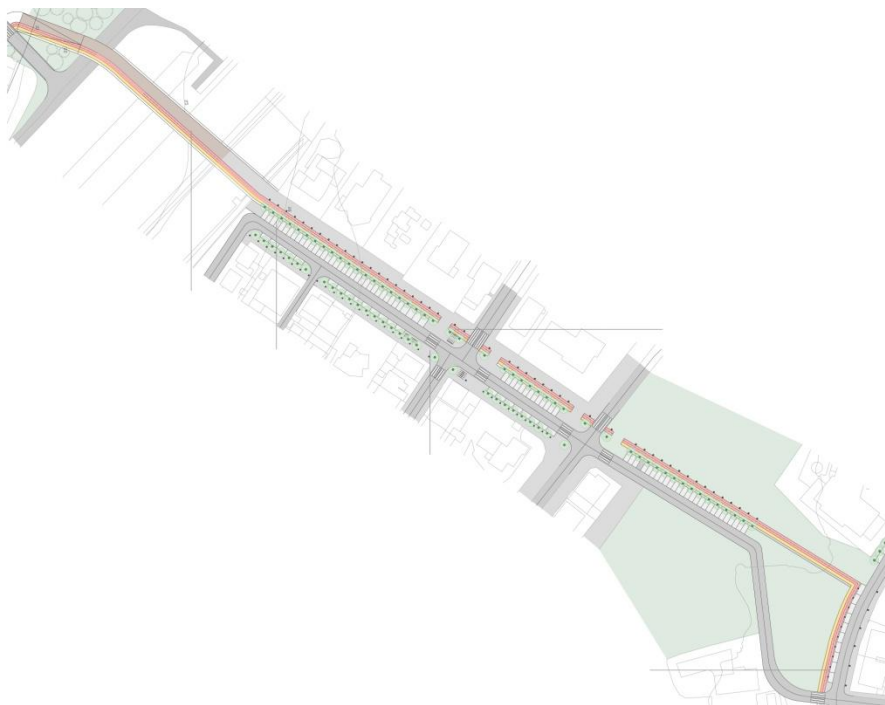
The trees and other plants had been chosen as pine tree, lemon tree, orange tree, maquis, grass.

**Figure 48 |**  
Combination of trees,  
Afat Mammadzada, |  
2015

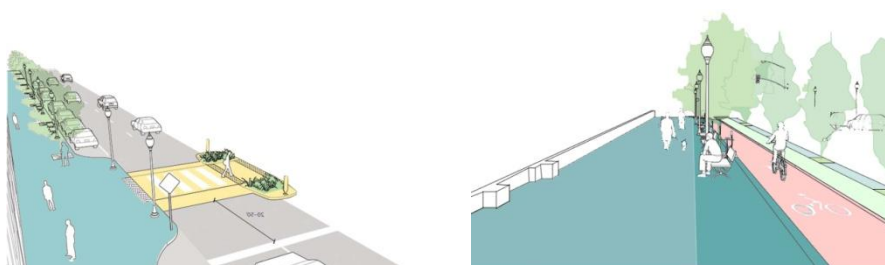


The line switches to the bridge which will cross the wide industrial pipeline. Being only pedestrian (also with cycling road) it brings people to the lighthouse surrounded by green yards on the north and industrial zone on the South.

DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES  
Presence of Local and Global References in Public Spaces



| **Figure 49**  
Plan of Rua Floresta  
| Afat Mammadzada,  
2015



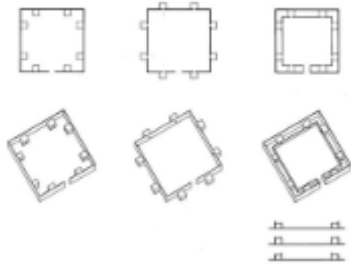
| **Figure 50**  
View of Rua Floresta,  
| Afat Mammadzada,  
2015



| **Figure 51 |**  
Bionical transition  
| Afat Mammadzada,  
2015



### III | Rehabilitation proposal



**Figure 52 |**  
Hortus Conculus  
Donald Judd |

The complex of the lighthouse is surrounded by the road from the main motorway around the Northern part of the city. The bridge will bring people to the North, natural coast passing near the Lighthouse of Sines. The main building of Sines has four flats, two in North, two in South and residents there are workers of Marina (see CHAPTER III, The Lighthouse).

Keeping the main building as it was before, the other small equipment buildings were planned to be demolished. Rectangular form of the territory reminds the work of Donald Judd, houses within a wall or outside or between two walls. The idea with Hortus Conculus (fig. 52) also fits local nature. from Donald Judd's work is appropriate houses within the wall outside. The perimeter is equal to 210 meters which allows to build in approximately 778 sq m. as a reference can be some works of Aires Mateus.

An area had been extended by adding a triangle on the West side. The triangle is a basement of an "infinity" type of the pool facing to the ocean.

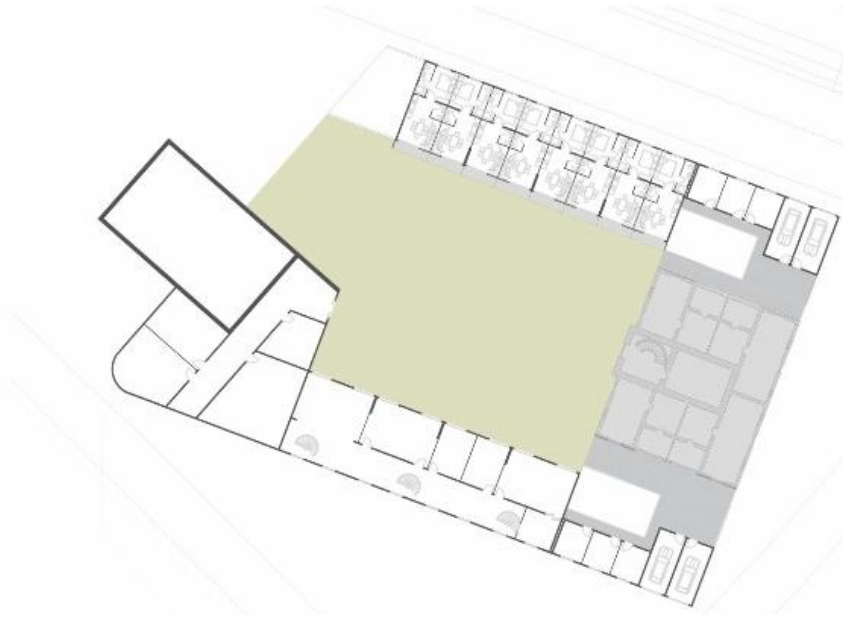
The volume represents two blocks in the North and South in traditional style with gable roofs. Demolished small constructions will be relocated to the ones, planned in East. West block is has an opened entrance to the yard and refers to a swimming pool activities.

The area of **ground floor** is 1544 m<sup>2</sup>. Left block consists of gardener's room and maintenance storage in the entrance and eight family cottages for 4 people with an area equal to 80 m<sup>2</sup>. Each of them has a studio room oriented to the courtyard which is filled with lawn. There are small terraces in front of each cottage which is also BBQ zone.

Right block (from the entrance) has a big hall with a small activities as billiards and table tennis, here are located three spiral staircases leading to rooms on the first floor. Rooms are as the following: restaurant/breakfast room with a kitchen, GYM with locker rooms and a reception. The pool block has also fitting rooms, SPA.

In front of the entrances to the flats there are new constructions for the small office for the light controllers, an alternator, maintenance storage for the garden workers have in front of the house and four garages, one for each house.

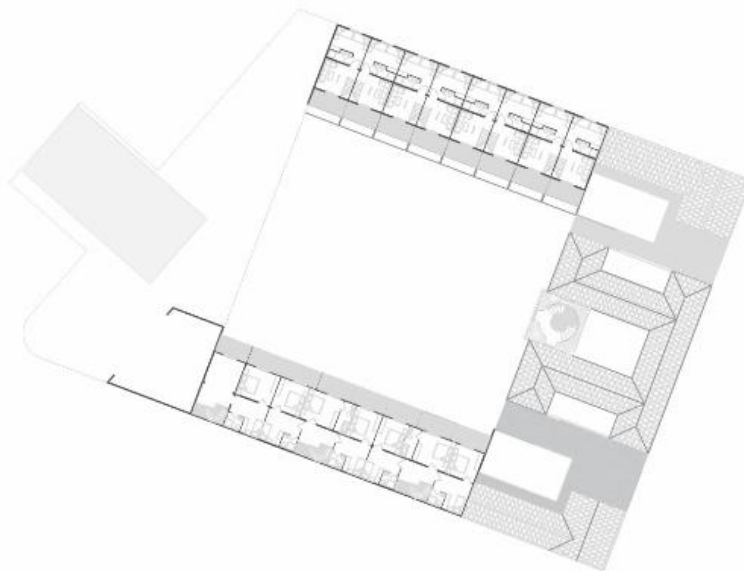
DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES  
Presence of Local and Global References in Public Spaces



| **Figure 53** |  
Ground floor plan  
| Afat Mammadzada,  
2015

On the **first floor** of the left block there are the rest of rooms of cottages that include resting area with a big terraces and bedrooms. Right block has seven hotel rooms five of which has two bedrooms (one double and one single) and two double rooms. The access to them is from the three halls with spiral staircases. Each room has a big terrace facing towards to the courtyard.

The interesting part of this level is the swimming pool. It surrounded by the big terrace facing to the ocean. The bar has adjoined here.



| **Figure 54** |  
First Floor Plan  
| Afat Mammadzada,  
2015

## VI | CONCLUSION

DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES  
Presence of Local and Global References in Public Spaces

## CONCLUSION

Several purposes of public spaces had been listed in this work. The average age, different interests prevent people from going out, meet or socialise. Considering different public spaces in chapters above had been mentioned number of open big squares as well as covered multifunctional malls. And the most useful of them are nevertheless streets, the best of which are boulevard which became a solution in present project. And what about urban design? If we talk about an open public space and making any project as it, we should make a kind of rehabilitation of the urban area and give a new design.

Sines as a city makes it a great port locations as well as an industry center. People living here are basically industry workers and, because of the small size of the city their angle of view is not so much. Walking in the streets you can always see (from open high points) even a small part of local industry. And the city needs more places to go by foot. Finding green line solution is good for its treatment. For providing a better comfort for citizens the whole attention should be in solving of the problem basing in convenience of the areas for rest, education, training, demonstration (in case of Sines it is topical because this city is the host city for the World Music Festival); allocation of the important buildings, spaces, objects in terms of architecture; implementation of the development defining target group and suitable density; " target 65% of transport public expenditure on projects that benefit pedestrians, cyclists and public transport users" (Urban Task Force, 1999).

Keeping the history or even bringing it back to people and to the city is one of the main task for an architect in urban rehabilitation. Above were mentioned few examples of rehabilitated lighthouses and in the case with Sines lighthouse it is also a good solution to give bag the meaningful object to citizens.

And proposed project by increasing limits of green public spaces eases the access from one point to another and implements new natural spirit to industrial city.

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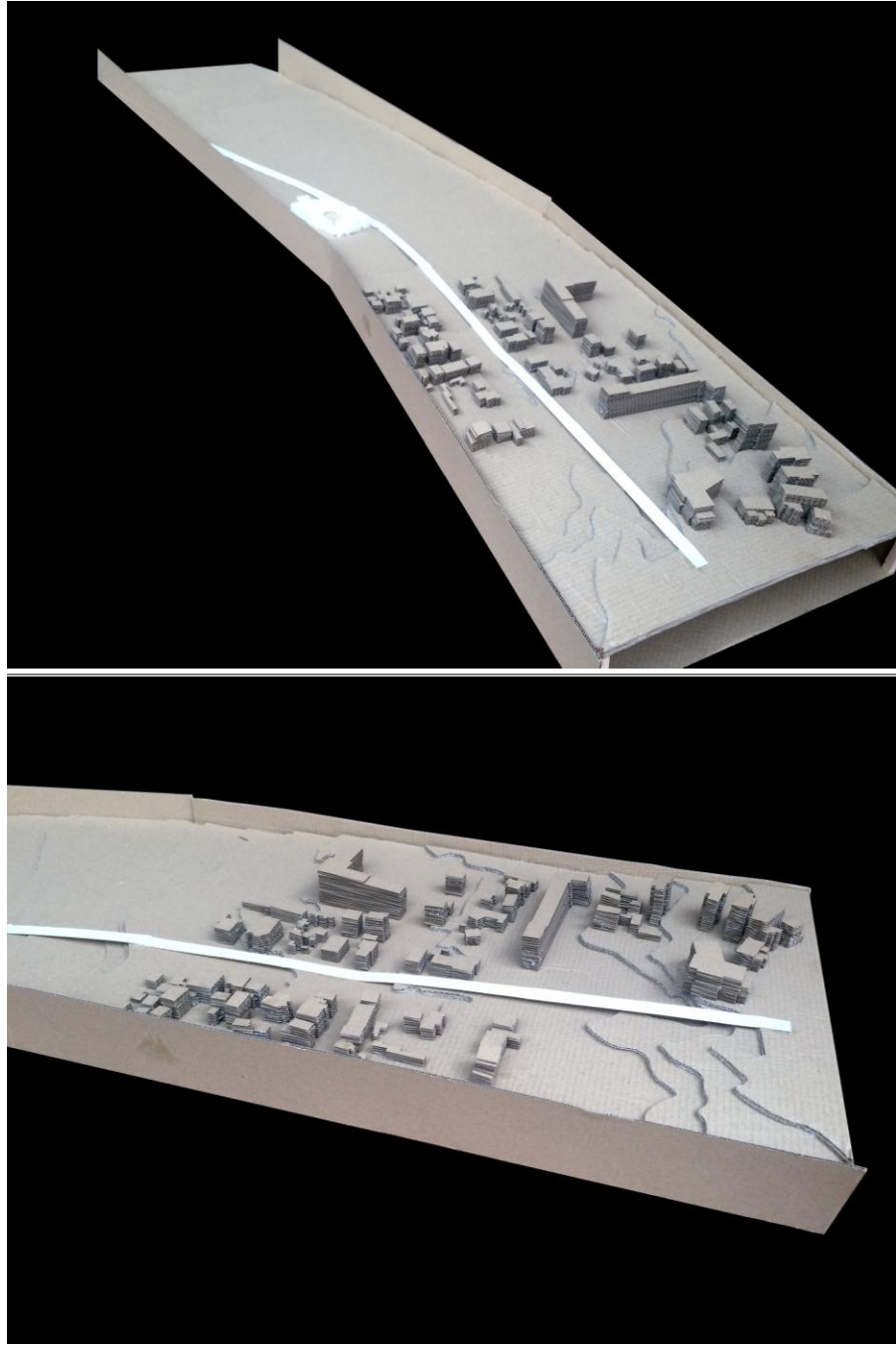
<http://www.dezeen.com/2014/08/29/pablo-bronstein-lighthouse-beach-hut-nicholas-hawksmoor-folkestone/>

## VIII | MODELS

DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES  
Presence of Local and Global References in Public Spaces

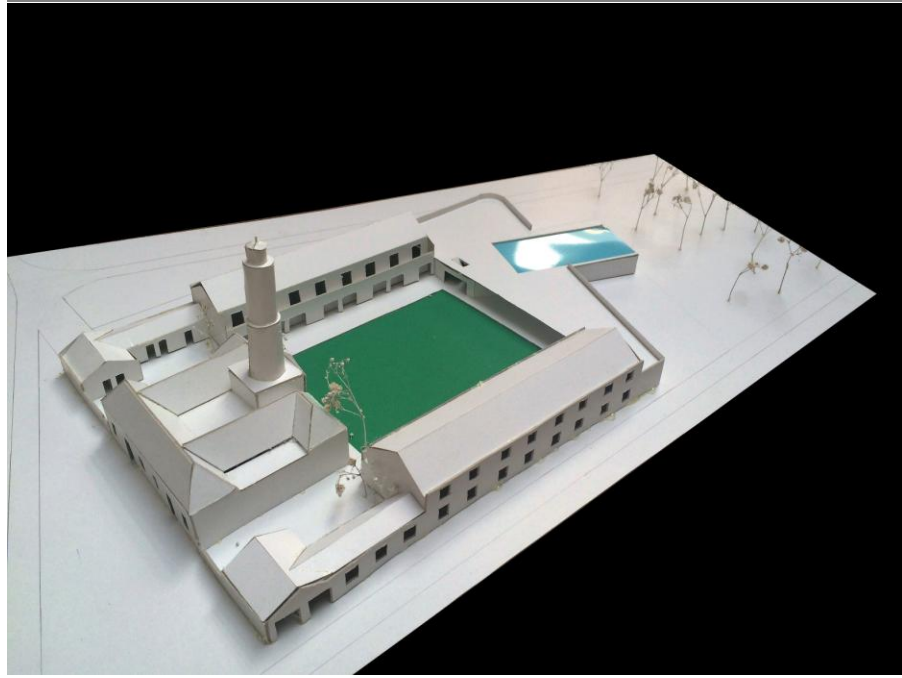
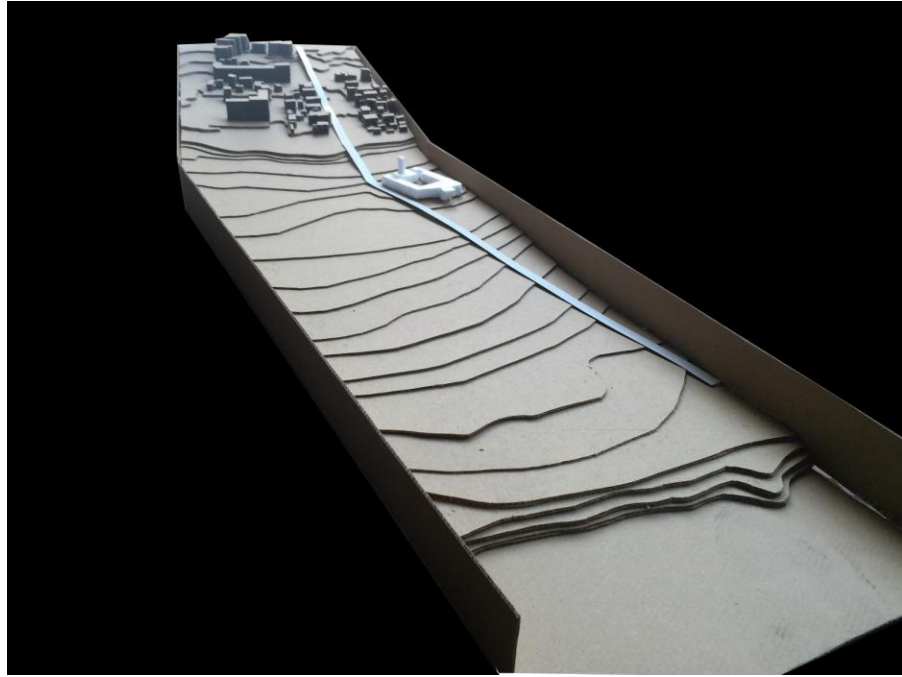


DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES  
Presence of Local and Global References in Public Spaces



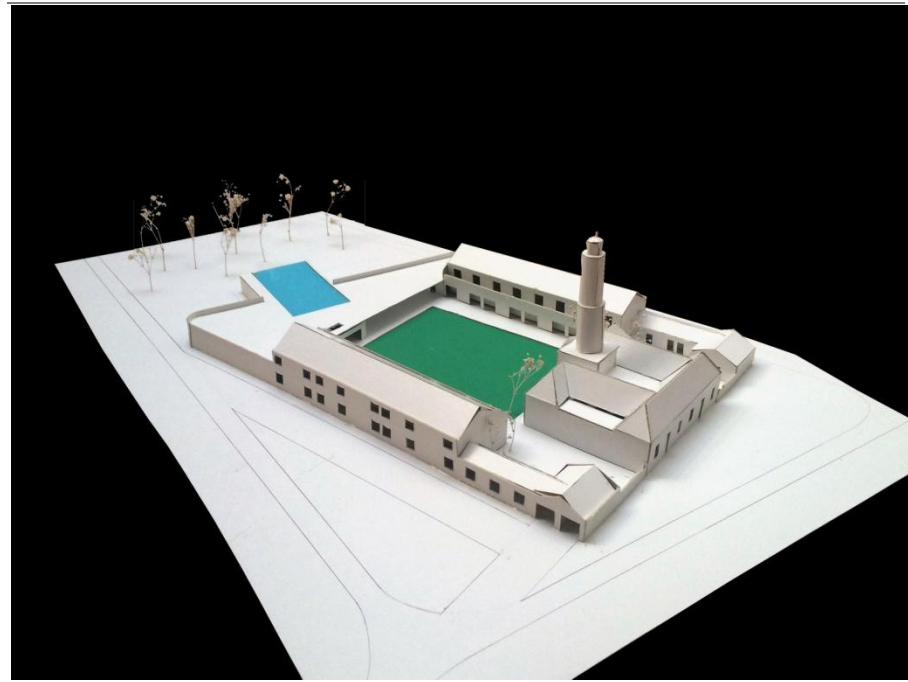
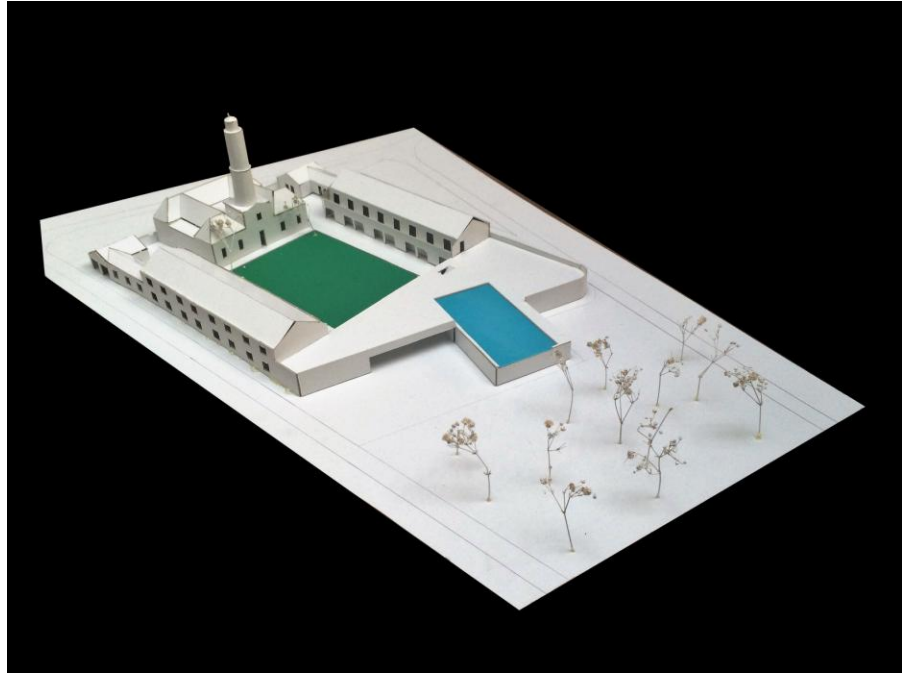
DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES  
Presence of Local and Global References in Public Spaces

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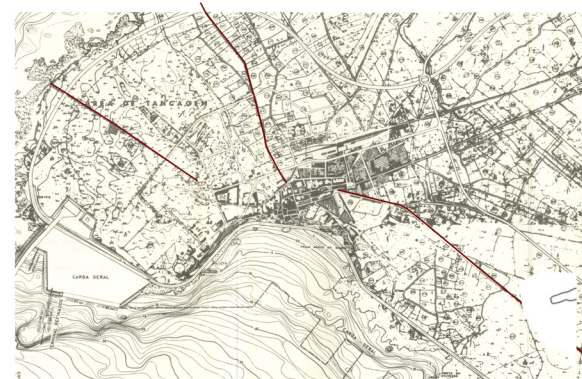
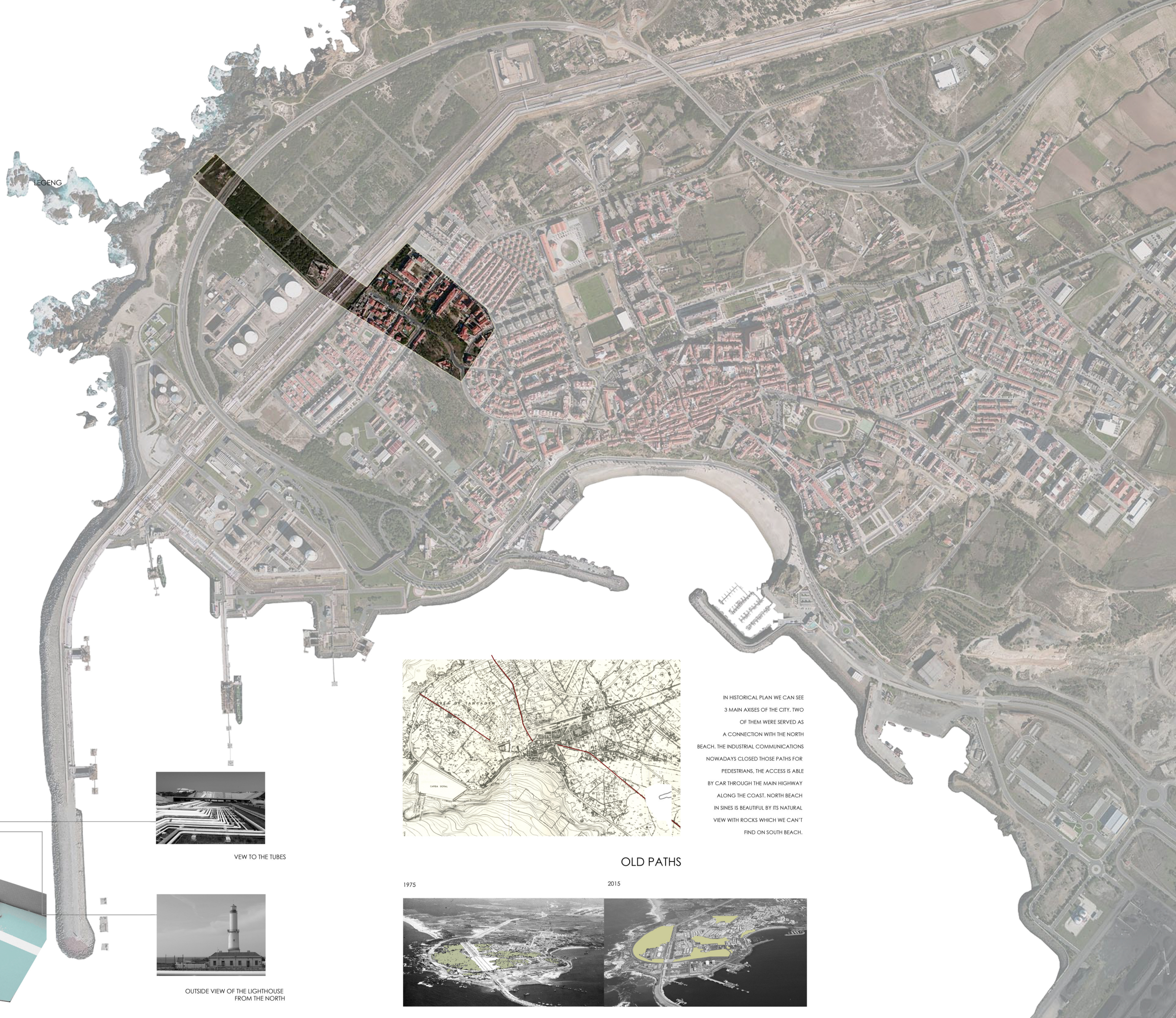


## CONNECTIONS

Oil Pipeline  
Topography  
Railway  
Cave

- Radial connection
- East - West connection
- North - South connection
- Highway
- Radial connection

Objective of the project / location:  
The project aims to create connection between city and nature, rehabilitate existing infrastructure using trees. The idea is to implement the greenary from Camping park to the city.  
Regeneration of existing area:  
Adding new element to soules streets according to the references. Reactivating and adding public spaces, variegating social life of all generations. Rehabilitation of the city by keeping the subject of industrial city. The identity of Sines is based on quality relationship with the sea, since its origin is a fishing and beach area. The growth in recent years Sines this relationship affected by constructing and closing boundaries. The consequence was the loss spatial quality which affected directly the social fabric of the city. In the future Sines becomes on of the biggest industrial cities of Atlantic port of Europe.



IN HISTORICAL PLAN WE CAN SEE  
3 MAIN AXES OF THE CITY. TWO  
OF THEM WERE SERVED AS  
A CONNECTION WITH THE NORTH  
BEACH. THE INDUSTRIAL COMMUNICATIONS  
NOWADAYS CLOSED THOSE PATHS FOR  
PEDESTRIANS, THE ACCESS IS ABLE  
BY CAR THROUGH THE MAIN HIGHWAY  
ALONG THE COAST. NORTH BEACH  
IN SINES IS BEAUTIFUL BY ITS NATURAL  
VIEW WITH ROCKS WHICH WE CAN'T  
FIND ON SOUTH BEACH.

## OLD PATHS

1975

2015



VIEW TO THE TUBES



OUTSIDE VIEW OF THE LIGHTHOUSE  
FROM THE NORTH

CONNECTION ARE MODEL | 1:1000



FACULDADE DE ARQUITETURA  
UNIVERSIDADE DE LISBOA

INTEGRATED MASTER IN ARCHITECTURE | 2015/2016 | FINAL MASTER PROJECT |

DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES  
PRESENCE OF LOCAL AND GLOBAL REFERENCES IN PUBLIC SPACES

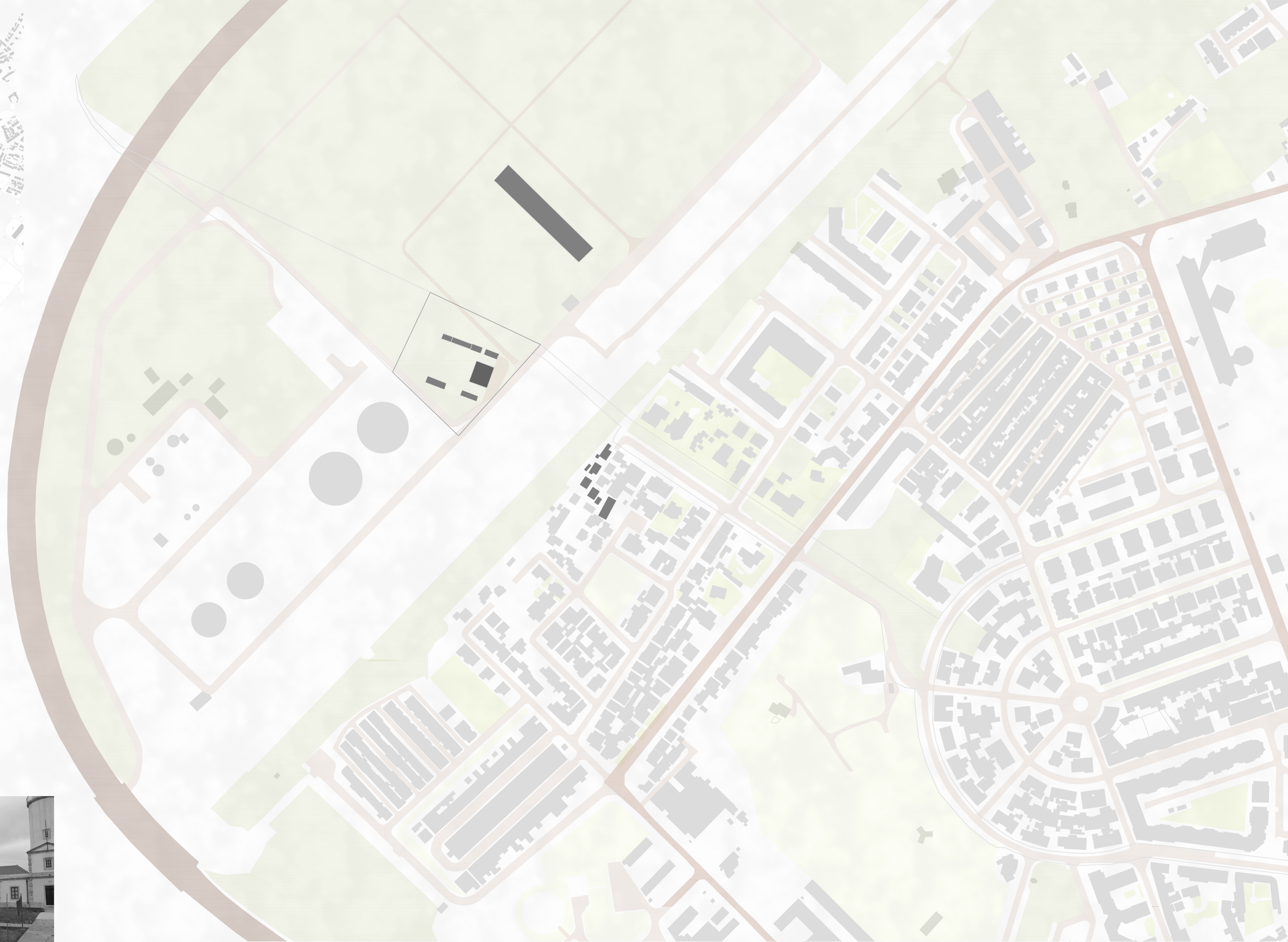
| AFET MAMMAZADA | 20148100 | SCIENTIFIC ADVISOR | FILIPA ROSETA | URBAN CONTEXT | SINES

P 01

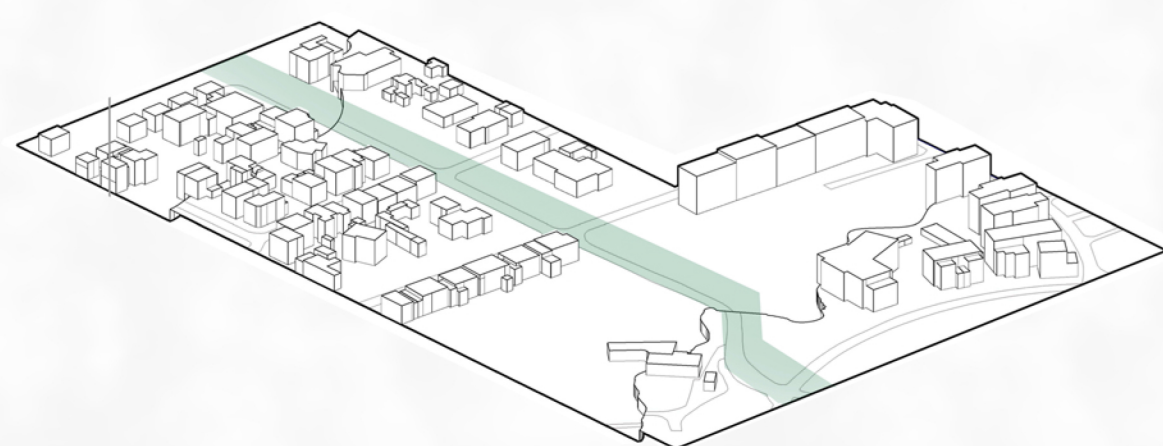




NEW CICLING ROAD PROPOSAL



URBAN MORFOLOGY | SCALE 1:2000

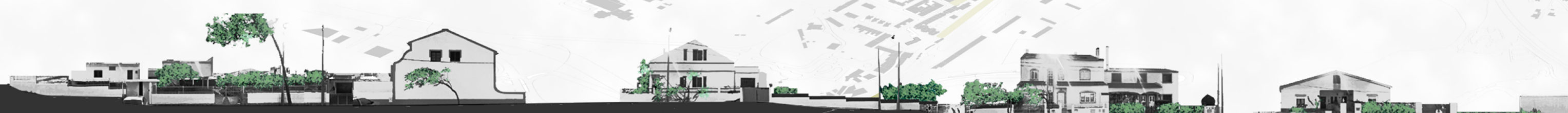


GREEN BOULEVARD THROUGH RUA FLORESTA

- Streets with greenings
- Streets with partial greenings
- Camping park
- Proposal streets



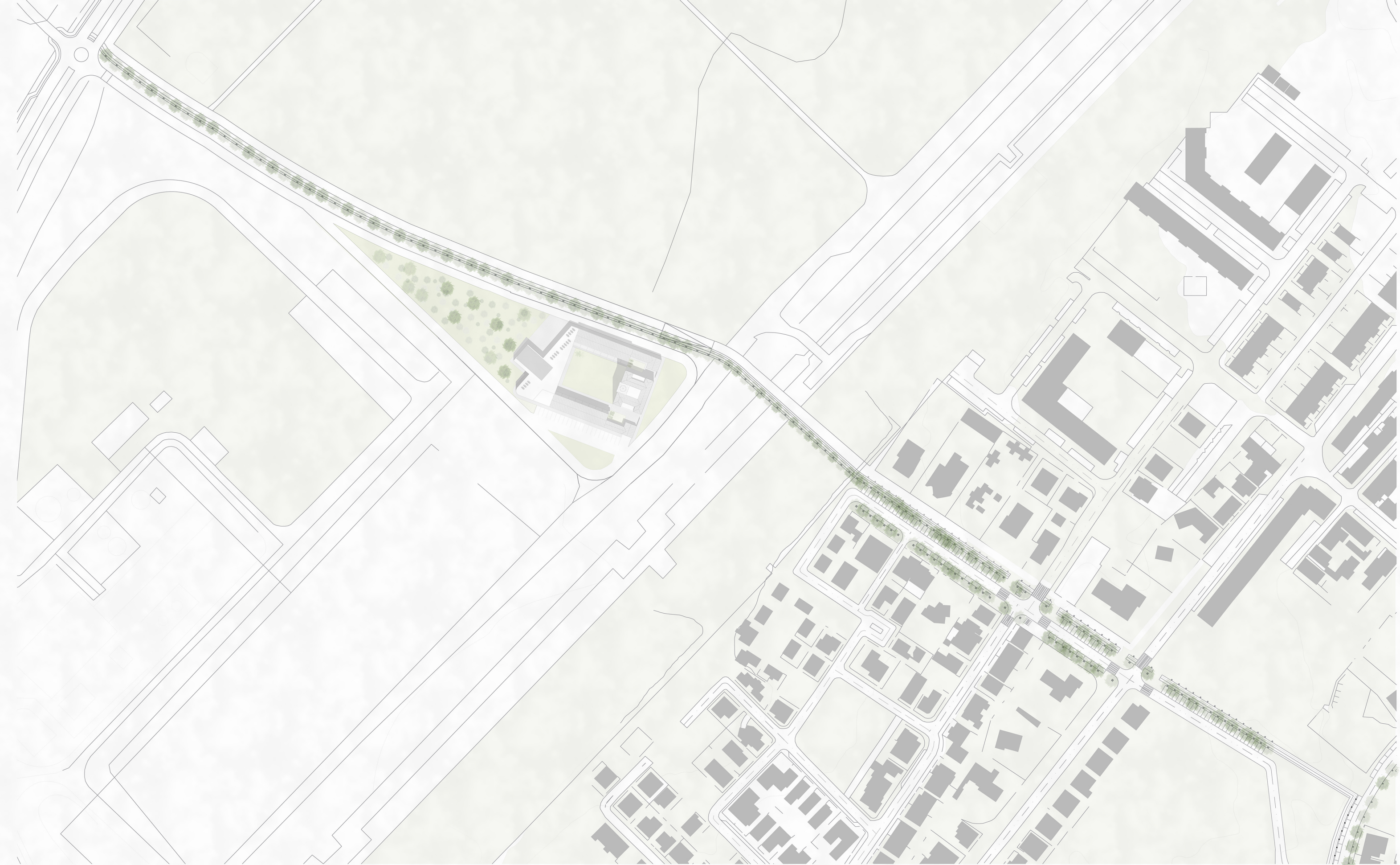
- WASTELAND GREENARY
- PUBLIC GREENARY
- PRIVATE GREENARY
- LOCAL ROADS
- SECONDARY ROADS
- PRINCIPLE ROADS
- URBAN BUILDINGS
- BUILDINGS TO DEMOLISH
- LIGHTHOUSE
- PROJECT AREA
- INTERVENTION AREA



RUA FLORESTA SECTION | SCALE 1:1000







URBAN CONTEXT PLAN 1 | SCALE 1:1000



URBAN CONTEXT SECTION 1 | SCALE 1:1000







URBAN CONTEXT PLAN 3 | SCALE 1:500

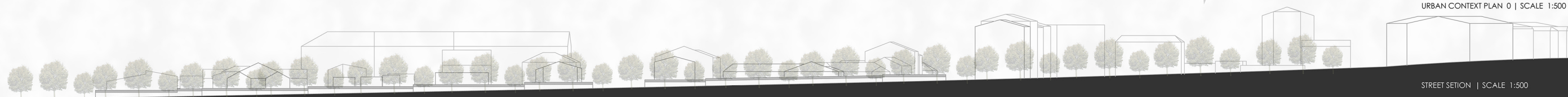


URBAN CONTEXT SECTION 3 | SCALE 1:500





URBAN CONTEXT PLAN 0 | SCALE 1:500



STREET SECTION | SCALE 1:500







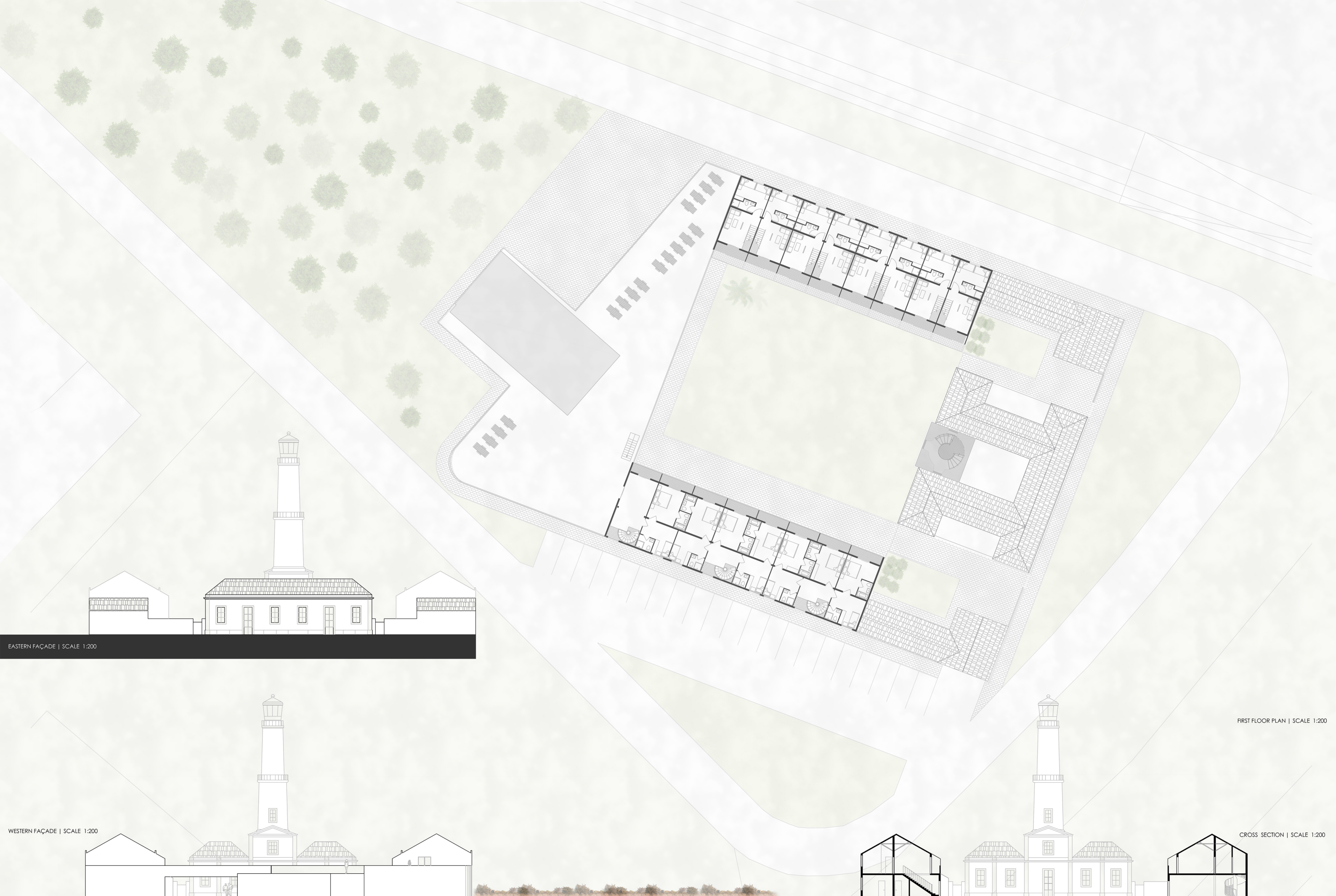
GROUND FLOOR PLAN | SCALE 1:200

SOUTHERN FAÇADE | SCALE 1:200



LONGITUDINAL SECTION | SCALE 1:200





EASTERN FAÇADE | SCALE 1:200

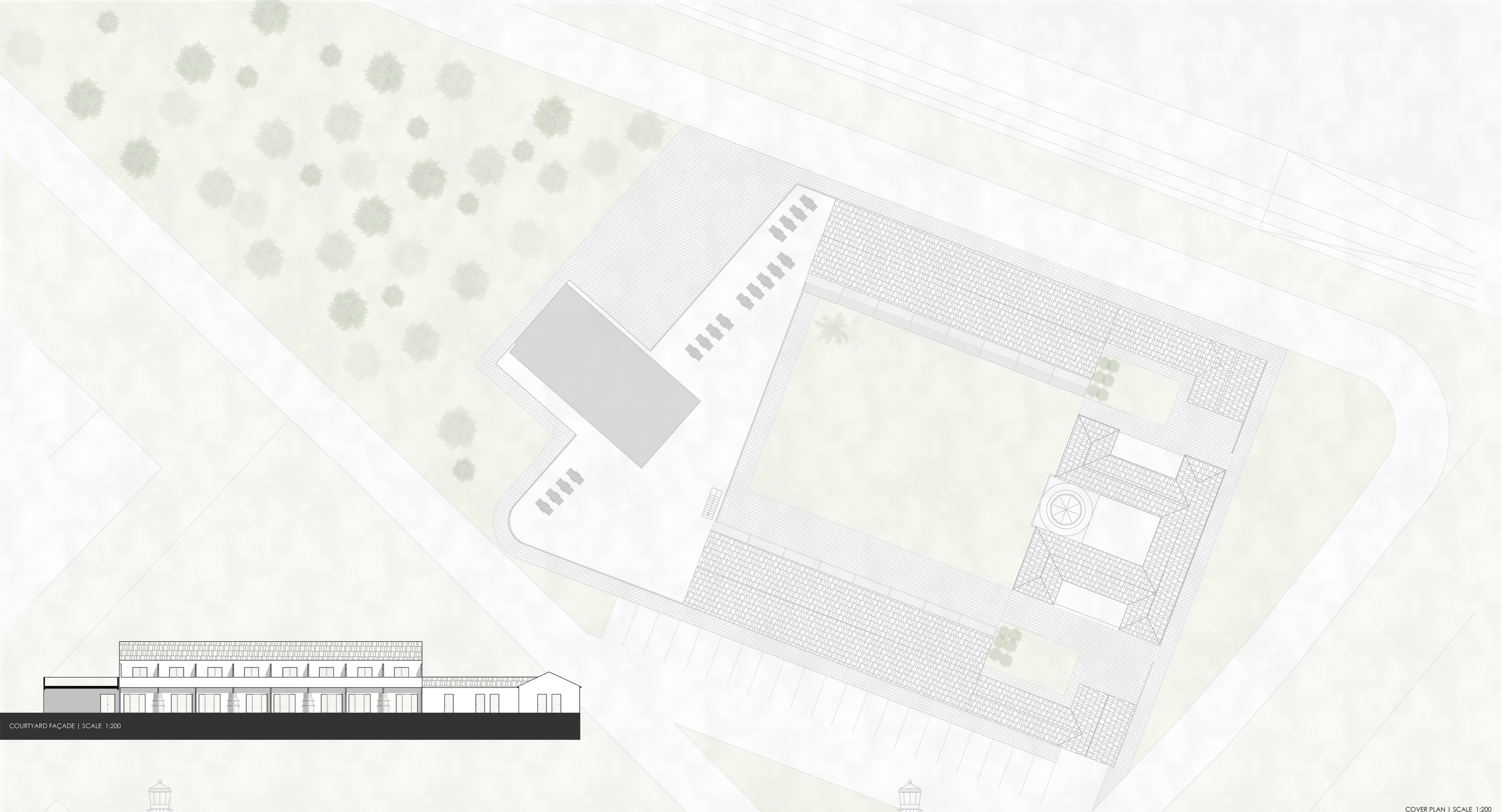
WESTERN FAÇADE | SCALE 1:200

FIRST FLOOR PLAN | SCALE 1:200

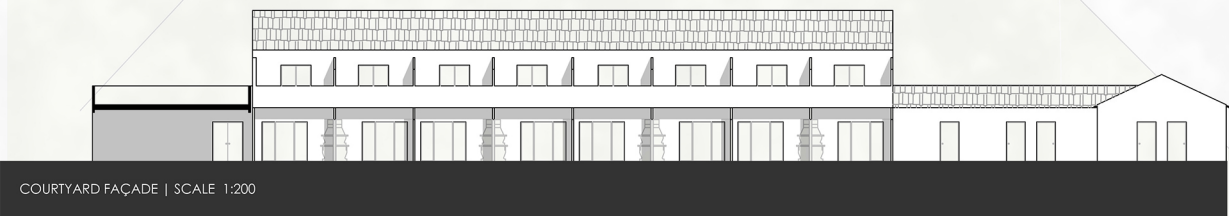
CROSS SECTION | SCALE 1:200



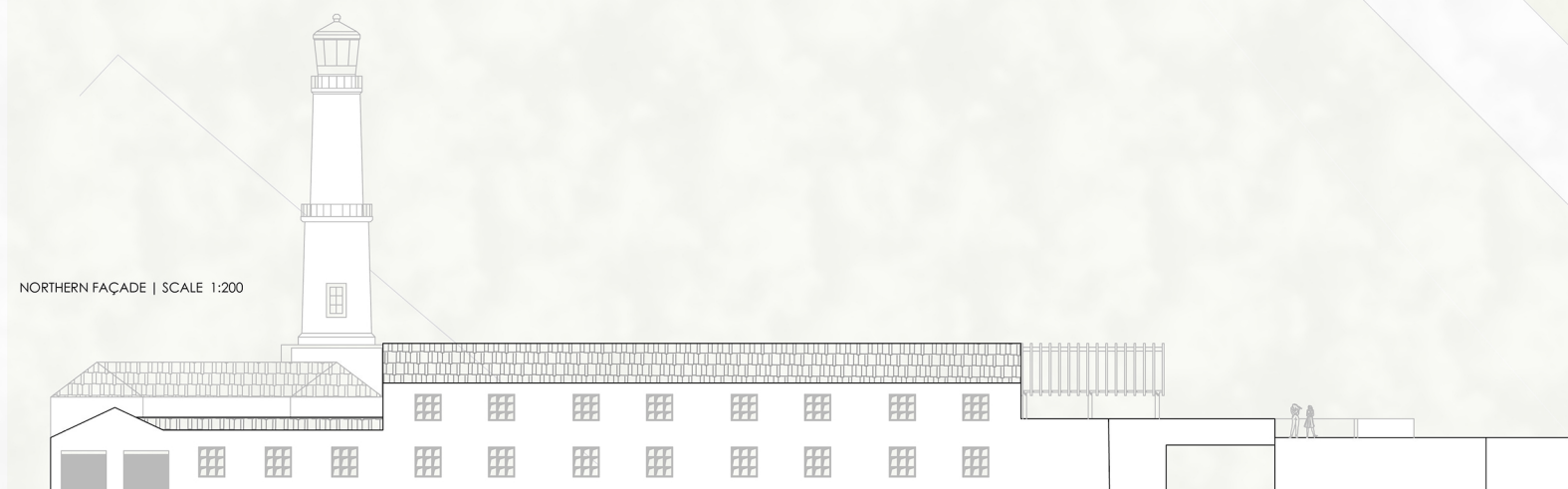




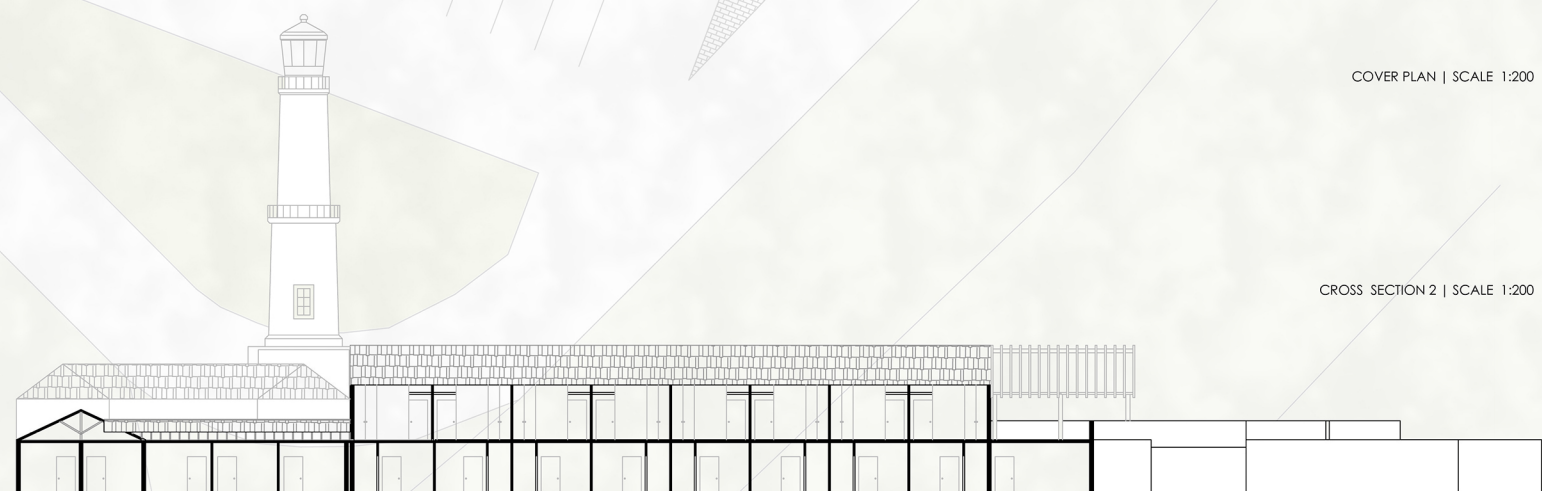
COVER PLAN | SCALE 1:200



COURTYARD FAÇADE | SCALE 1:200



NORTHERN FAÇADE | SCALE 1:200



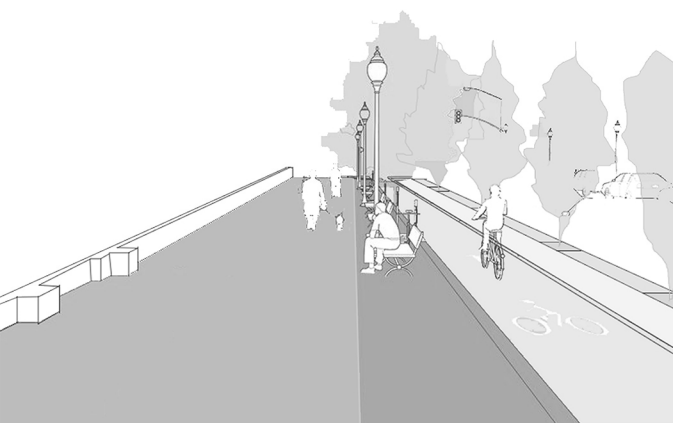
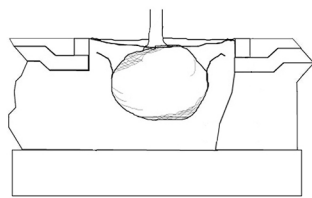
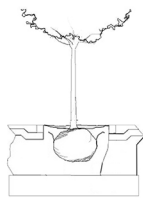
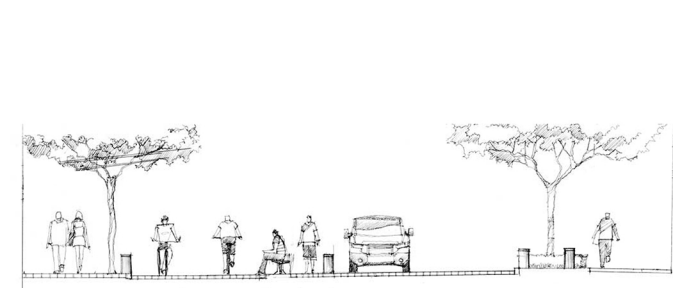
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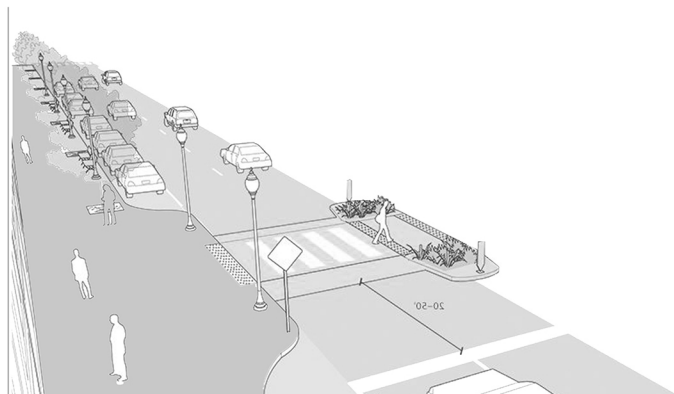




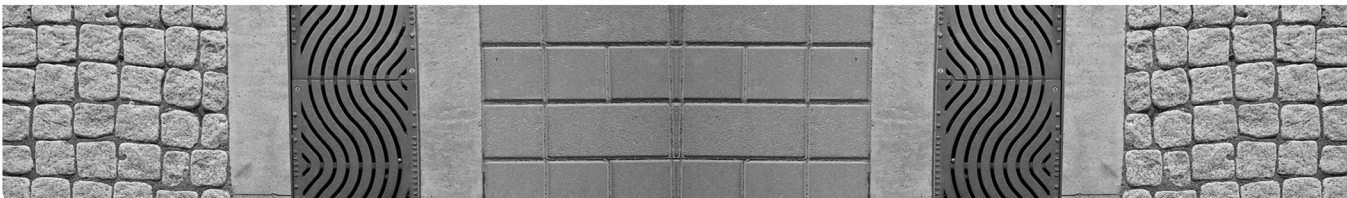
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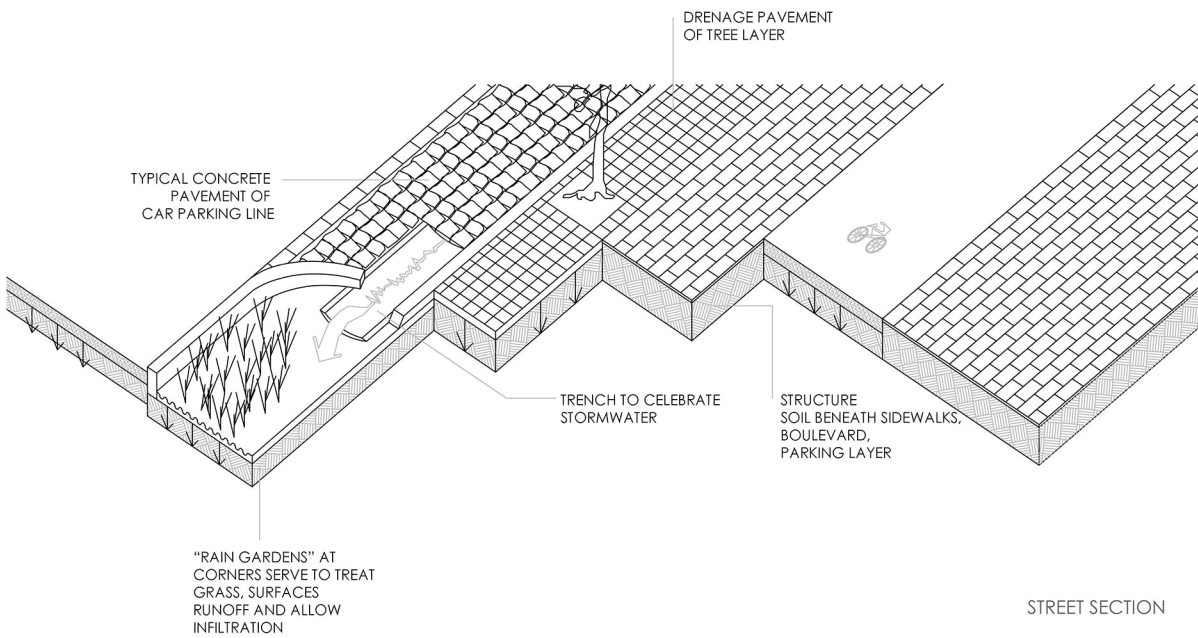
VIEWS OF THE S STREET



TREE COMPOSITION

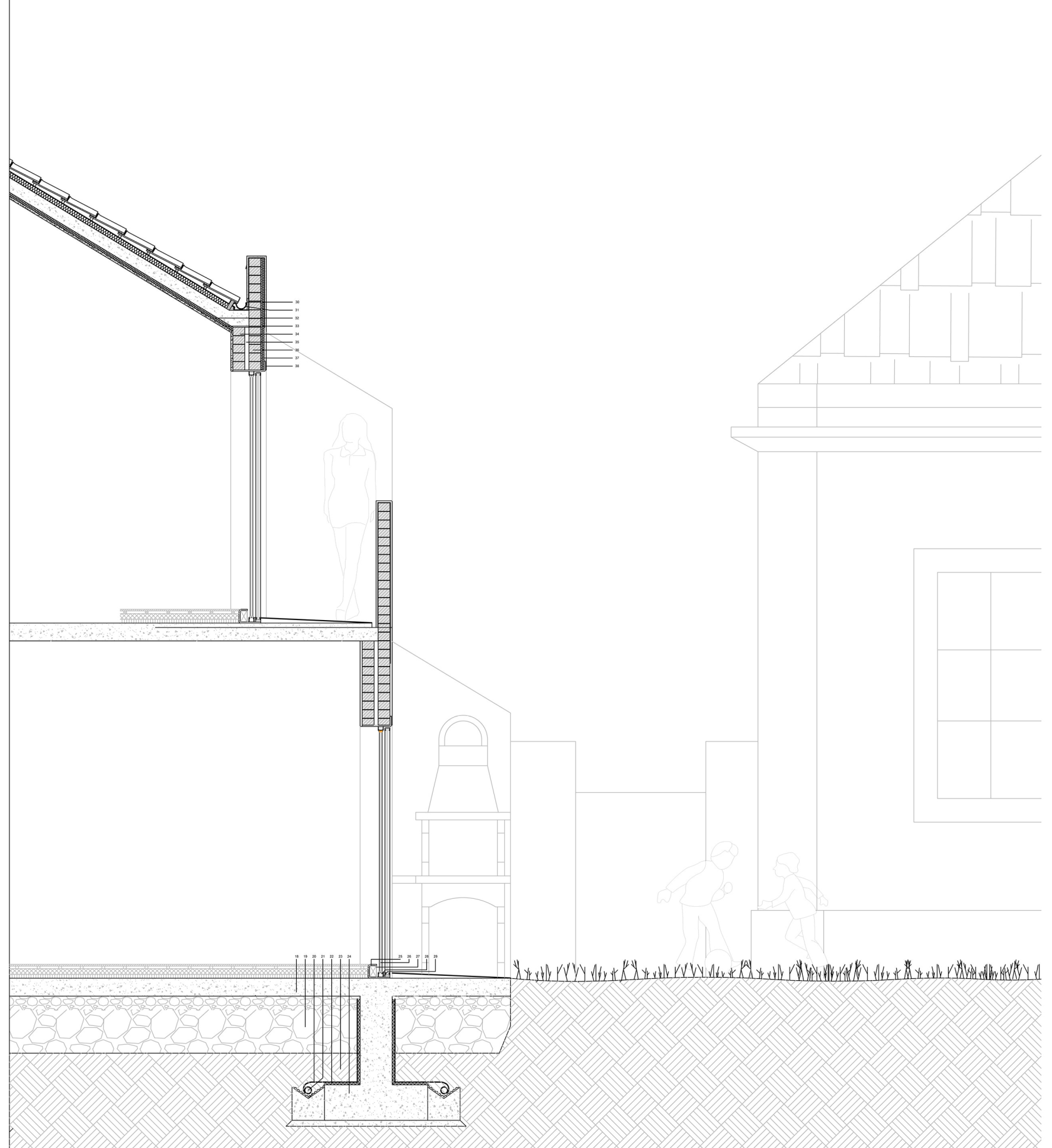
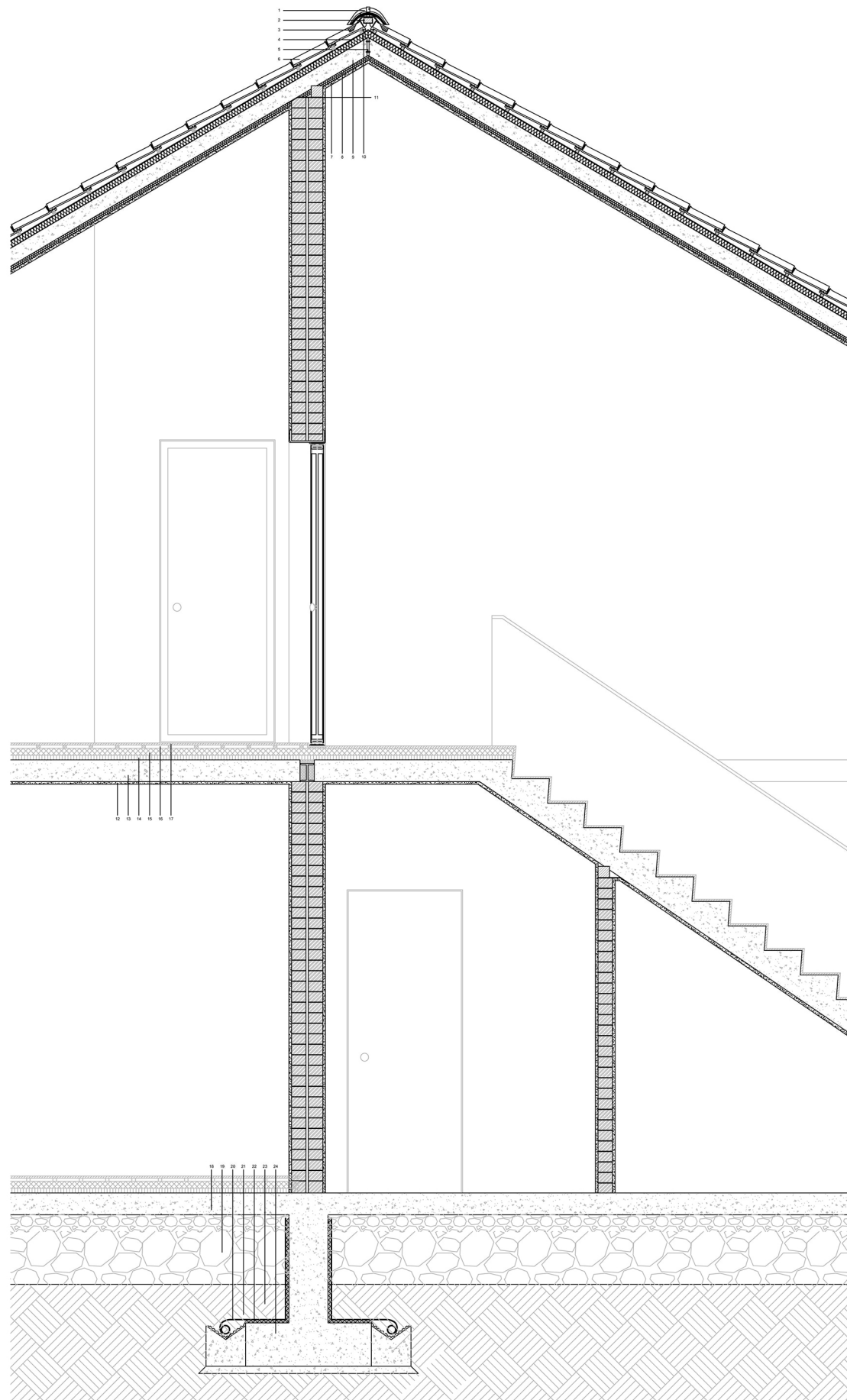


PAVEMENT



STREET SECTION





1-RIDGETILE; 2-RIDGE BEAM; 3-RIDGE AEROELEMENT; 4- WATERPROOF AND BREATHABLE MEMBRANE; 5-FASTENERS; 6-CERAMIC TILE; 7-TERMIC ISOLATION; 8-FINISHING IN COLOR; 9-CONCRETE STRUCTURE; 10-LATHING; 11-VAPOR BARRIER; 12-FINISHING; 13-CONCRETE SLAB; 14-ROOFMATE AND GEOTEXTILE; 15- FLOOR SCREED MATERIALS; 16-LAH TO SUPPORT THE FLOOR PAVEMENT; 17-FLOOR PAVEMENT; 18-GROUND CONCRETE SLAB; 19-ROCKFILL; 20-GEOTEXTILE; 21-SOIL; 22-DRENAGE MEMBRANE; 23- DRENAGE TUBE; 24-STRIP CONCRETE FOUNDATION; 25-"L" PROFILE; 26-DOUBLE GLASS SYSTEM; 27-SHEET; 28-MOBILE SYSTEM; 29-FIXING SYSTEM; 30-METALLIC RUFF; 31-GUTTER; 32-TERMIC ISOLATION; 33-PLATE PLASTER; 34-INSIDE BRICK WALL; 35-AIR LAYER; 36-OUTSIDE BRICK WALL; 37-TERMIC ISOLATION; 38-FINISHING

DETAILS | 1:20





PERSPECTIVE VIEWS

DEVELOPMENT OF PUBLIC SPACES IN INDUSTRIAL CITIES  
Presence of Local and Global References in Public Spaces

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Master in Architecture

July, 2016